

DOCUMENT RESUME

ED 177 169

TM 008 934

AUTHOR Carifio, James; And Others
 TITLE Selected Findings on the Impact of the CASPAR Alcohol Education Program on Teacher Training and Curriculum Implementation. Evaluation Report No. 8.
 INSTITUTION Cambridge-Somerville Program for Alcoholism Rehabilitation, Inc., Mass.
 SPONS AGENCY National Inst. on Alcohol Abuse and Alcoholism (DHEW/PHS), Rockville, Md.
 PUB DATE Feb 78
 GRANT NIAAA-AA-01242-03
 NOTE 478p.; Pages I 27-30 and I 34-8 were removed from this document due to lightness of print
 EDRS PRICE MF01/PC20 Plus Postage.
 DESCRIPTORS *Alcohol Education; *Attitude Tests; *Changing Attitudes; Curriculum Development; *Curriculum Evaluation; *Drinking; Evaluation Methods; Participant Satisfaction; Response Style (Tests); Secondary Education; Stereotypes; *Student Attitudes; Teacher Attitudes; Teacher Workshops; Test Reliability

ABSTRACT

The Cambridge and Somerville (Massachusetts) Program for Alcoholism Rehabilitation (CASPAR) was instituted to train teachers and social service workers in implementing alcohol education programs; to train selected high school students as peer leaders; and to promote community awareness of alcohol-related problems. A sequential cycle evaluation model was used, primarily to assess the impact of the CASPAR curriculum--entitled "decisions about drinking"--upon students; and secondarily, to evaluate their teachers, who had participated in curriculum implementation workshops. The five questionnaires, administered to secondary school students, measured: alcohol knowledge, attitudes, and stereotypes; use/abuse; prior exposure to alcohol education; social desirability; and satisfaction with teaching session. Teachers completed a knowledge and attitude questionnaire and a process log which covered: lesson content, teaching conditions, critical incidents of student behavior, and ratings of students, self, and the teaching session in general. Findings were reported in terms of the following variables: (1) type of questionnaire; (2) response mode--correct, incorrect, uncertain; (3) sex of teacher and student; (4) units of instruction and amount of prior exposure; (5) students, groups, grade levels, and communities; (6) time of year and day; (7) teacher type and teaching conditions; and (8) extent of curriculum implementation. (A separate report discusses student attitude changes after Alcohol Education Week. The instruments are appended.) (CP)

 * Reproductions supplied by EDRS are the best that can be made *
 * from the original document. *

ED177169

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY.

SELECTED FINDINGS ON THE IMPACT OF
THE CASPAR ALCOHOL EDUCATION PROGRAM
ON TEACHER TRAINING AND CURRICULUM IMPLEMENTATION

James Carifio
Ronald M. Biron
Daniel Sullivan

Evaluation Report No. 8

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

J. Carifio

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

CASPAR, INC
(The Cambridge-Somerville Program For Alcoholism Rehabilitation)

Community Partner-Alcoholism Program

Departments of Medicine and Psychiatry
Cambridge Hospital (Harvard Medical School)

A unit of the Cambridge-Somerville
Mental Health and Retardation Center

(NIAAA Grant No. AA 01242-03) February 1978

JM008 934

PREFACE

Since the primary funded mission of the CASPAR Alcohol Education Program was to conduct alcohol education with teachers and school personnel and then to train responsible decision-making oriented teachers to conduct alcohol education with students, the focus of this report will be upon the ultimate impact of this process; namely, the effects of alcohol education conducted by CASPAR-trained teachers upon Somerville students. This focusing upon student impact does not mean that teacher-training or post-training follow-up data will be ignored in this report but only that the teacher data will be made secondary to the student impact data and presented primarily as secondary or support evidence of program effects and outcomes. This same type of secondary or support evidence emphasis will also be given to the peer leader component of the CASPAR Alcohol Education Program and to a number of other CASPAR Alcohol Education Program activities in this report. The reason for this primary-secondary emphasis approach is that the CASPAR Alcohol Education Program is a very complex program evaluatively, and each component of the program actually merits a separate in-depth, sole-focused report. All components of the CASPAR Alcohol Education Program, however, dovetail in the student impact data and by focusing on this data as the primary organizing principle one is able to see all components of the program at once in terms of alcohol education impact on a particular population. The focusing on Somerville students, therefore, is a functional focusing in terms of reporting on program impact.

The reader should note that in several instances, the present evaluators who became associated with the program at the beginning of its third funding year would liked to have pursued a number of further confirmatory analyses or employed higher level multivariate techniques, but there simply was not time or budget monies available. In other instances, the evaluators would have liked to pursue some more inventive data scaling procedures to reduce the complexity of the data collected and give better expression to findings which were suggestively interesting in terms of unanticipated outcomes. However, there was not time or budget monies available to pursue these data simplification procedures. The end results of these constraints, therefore, is that a number of the findings presented in this report must be viewed as being exploratory rather than confirmatory in nature. This is to say, a number of the findings are somewhat tentative, and might change to some degree with further analyses. Changes in results if they do occur, however, will most likely be in detail and not in essential substance as the effects observed in spite of all of the noise are that strong and supported via cross-validation. It is the magnitude of effects in a somewhat noisy design, therefore, that is truly remarkable, particularly given the durations of direct interventions.

A word must be said about the lack of alcohol consumption data for students in the present report. The post-intervention consumption data is not scheduled to be collected for some months hence. Thus, the obvious lack of student consumption data in this report; namely,

the data are forthcoming. The critical focus of the present report is on what alcohol education is and what it can be expected to do both conceptually and empirically. This focus has been adapted for two very basic reasons. These two reasons are:

- (1) alcohol education has not been formally conceptualized in any rigorous learning-theory-centered fashion; and,
- (2) one cannot understand the relationship between alcohol education and consumption without understanding the essential nature of alcohol education first as will become clear from the contents of this report.

The primary funded mission of the CASPAR Alcohol Education Program was to do alcohol education. This report, therefore, focuses on what was learned in the carrying out of that mission.

A word of thanks needs to be said to the teachers and administrators of two different school systems for their cooperation, patience, help, and moral support in the carrying out of this evaluation. A special word of thanks also needs to be said to all of the CASPAR staff, peer leaders, and Steering Committee for the help, support, and encouragement they gave in the bringing of this work to completion. A word of thanks must also be said to the Somerville CETA program for providing the CASPAR program with two data clerk trainees.

TABLE OF CONTENTS

	Page
Preface.....	1
Chapter I Community, School, Program and Curriculum Implementation Characterization.....	1
Chapter II Alcohol Awareness Education.....	14
Chapter III The Sequential Cycles Approach to Program Education.....	18
Chapter IV Methodology.....	23
Chapter V Psychometric Findings.....	69
Chapter VI Pretest Knowledge and Attitude Findings: Evidence of Prior Program Impact.....	91
Chapter VII Student Pre to Post Test Knowledge and Attitude Findings: Direct Evidence of Program Impact.....	152
Chapter VIII Critical Incidents Findings: Direct Evidence of Mediation Effects.....	171
Chapter IX Student, Teacher and Staff Curriculum Process Ratings.....	184
Chapter X Teacher Pre-to-Post to Delayed Post Knowledge and Attitude Findings: Significant Changes in Primary Change Agents.....	197
Bibliography.....	216
APPENDICES	
Appendix I Curriculum Implementation and Teacher Workshop Instruments.....	
Appendix II Preliminary Findings of an Alcohol Education Week in the Comparison Community.....	
Appendix III Teacher's Manual: Evaluation Guidelines.....	
Appendix IV ANOVA Results and Cell Means by Grade, Groups and Level of Prior Primary Exposure: Pretest and Post Test.....	

Appendix V	ANOVA Results and Cell Means by Group, Type of Intervention, and Combined Level of Prior Program Exposure: Pretest Scores and Change Scores.....
Appendix VI	Development and Methodological Use of Critical Features Scale.....
Appendix VII	ANOVA Results and Cell Means by Implementation, School Level, Group and Sex: Student Feedback Scale Scores.....
Appendix VIII	Repeated Measures Analysis Results for Teacher Workshop Pre, Post and Delayed Post Tests.....

CHAPTER I

COMMUNITY, SCHOOL, PROGRAM, AND CURRICULUM IMPLEMENTATION CHARACTERIZATION

Community, School, and Program

Somerville, Massachusetts is a densely-populated, blue-collar, city of 85,000 people which borders Boston and Cambridge. The population is Catholic, the majority of whom are of Irish or Italian background. One in seven, or about 8,600 Somerville adults are estimated to have problems with alcohol. The majority of these adults are family members who directly affect the lives of approximately 8,200 children in the community and schools.¹

There are approximately 11,700 students in the Somerville public school system which is composed of 13 elementary schools, 3 junior highs (Grades 7-9), 1 senior high (Grades 10-12). There are also alternative junior and senior high schools and a vocational school (Grades 9-12).² An additional 3,000 attend parochial schools in the city. The public school system has been mandated by the school administration since the fall of 1975 to teach health education including alcohol education in 7th, 8th and 12th grades.

The CASPAR Alcohol Education Program is one component of the larger CASPAR (Cambridge and Somerville Program for Alcoholism Rehabilitation) organization. CASPAR is a community partner of the Cambridge-Somerville Mental Health and Retardation Center and is responsible for inpatient-outpatient services for alcoholics and their families, a detoxification center, and community residences for Somerville and Cambridge community members. As part of the comprehensive Alcoholism Program, CASPAR staff members began running caregivers' and teachers' workshops in Somerville in 1972. However, the education program itself was not instituted until NIAAA funding was awarded in 1974.

The program that emerged has four main thrusts: first and foremost, training teachers to develop and implement effectively an alcohol curriculum in grades 3-12; second, training selected high school students to be peer leaders, or alcohol educators capable of teaching and intervening with their peers in many different settings;

¹Based on student responses to the following question on the CASPAR student survey administered to 1200 students in Somerville: "Do you or did you wish that either one or both of your parent(s) would drink less?" Twenty-nine percent answered "yes". This percent rate was recently validated by analysis of peer leader selection data where more than 70% of known Children of Alcoholic Families (CAF) and less than 20% of known non-CAFs answered "yes" on this question.

²Based on 1976-1977 school statistics.

third, training and consulting with staff of other youth-serving agencies in Somerville; and last, raising the consciousness of the general Somerville public to alcohol issues.

Figure 1 presents the major functional components of the alcohol education program. The figure depicts three important facts about the program: (1) the primacy of impacting students; (2) the multiplicity of activities which the program uses to impact directly and indirectly upon the community and specifically the school system; and (3) extent of the chains of communication generated by the program as exemplified by staff communication to peer leaders and peer leaders to other students. What the figure does not depict is the diversity and ripple effect of informal activities as they are carried out, for example, by trained students conversing with parents of friends and then parents talking with neighbors. Students are exposed to a multiple and extensive, formal and informal, direct and indirect, community-school network. A student could be a peer leader or a member of CASPAR Club groups or have experienced the school curriculum or talked to a trained teacher or attended a performance of "Drink, Drank, Drunk" among other activities.

Table I lays out the historical dimensions of the formal program activities and demonstrates the depth of the network. It illustrates how student exposure can vary according to time, source and program activity.

What is also obvious from the table is that the curriculum implementation beginning in the winter of 1977 was for many students not their first exposure to the program. As can be seen, the program had already directly or indirectly impacted on many of these students. Figure 2 portrays the known direct formal impacts on the students prior to the curriculum implementation.

As is shown, there are four ways that trained teachers could have impacted on the students prior to the curriculum implementation. In their Basics training participants were asked to teach two sessions with at least one of their classes. Table II presents a breakdown of participants in the eight basic workshops by workshop and type of school personnel. At least 68 classes of students would have had at a minimum two alcohol education sessions prior to the curriculum implementation.¹

As part of the Methods workshops, participants are required to teach six to seven sessions with at least one of their classes. Table III presents a breakdown of the Methods workshop participants by workshop and type of school personnel.

¹Other participants also located groups of students to practice the sessions.

Table I: Chronology of Major CASPAR Alcohol Education Activities during Funding Period.

	FALL	WINTER	SPRING
<u>72-74</u> -Pre-Grant workshops by staff -2 Basic workshops (N=28) -6 Caregiver workshops (N=60) -Advanced workshop (N=12)	<u>74-75</u> -Steering Committee begins (N=20)	-Basic I (N=13) -Peer leader WI (N=12) -Community-School Leaders Conference (N=60) -Somerville Youth Program Workshop (N=10) -Sanctuary Inc. Workshop (N=10)	-Basic II (N=14)
SUMMER			
<u>75-76</u> -Peer leader Summer Day Camp I (N=100) -Ceta Youth Workshop (N=10)	-Basic III (N=12)&IV (N=7) -Methods I (N=13) -Peer leader WII (N=12) -Catholic Charities Day Care Aides Wkshp. (N=20) -Mystic Housing Project Health Center Workshop (N=20) -Survey (N=1100)	-Basic V (N=12) -Methods II (N=11) -CASPAR Club I (N=8) -"Drink, Drank, Drunk" performances (N=400)	-Basic VI (N=5) -CASPAR Club II, III, IV (N=8,8,11) -Survey (N=1100) -Study Hall Group I (N=5)
<u>76-77</u> -CASPAR Club V, VI, VII (N=13,3,6) -SYEP (N=500) -Summer Day Camp II (N=200) -Teacher Curriculum (N=12) -SYEP Counselors Workshop (N=25)	-Basics VII & VIII (N=13) (N=15) -CASPAR Club VIII, IX, X (N=6,9,9) -Study Hall Group II (N=6) -Administrators Conference II (N=60) -CAP I (N=8) -CAP II (N=5) -Somerville Community Youth Agency Wkshp. (N=10) -DARE Girls program Workshop (N=12) -"Drink, Drank, Drunk" Performance (N=150)	-Methods III (N=10) -*Curriculum Tryout: Cycles I & II (N=242)&(890) -CASPAR Club XI (N=8) -CAP III (N=6) -CAP IV (N=9)	-Methods IV (N=12) -Cycles III (N=226)& IV (N=290) -CASPAR Club XII & XIII (N=11) (N=9) -CAP 4a (N=7) -CAP 5 (N=7)

Figure 2: Direct Formal Program Impact on K-12 Students
Prior to Curriculum Implementation

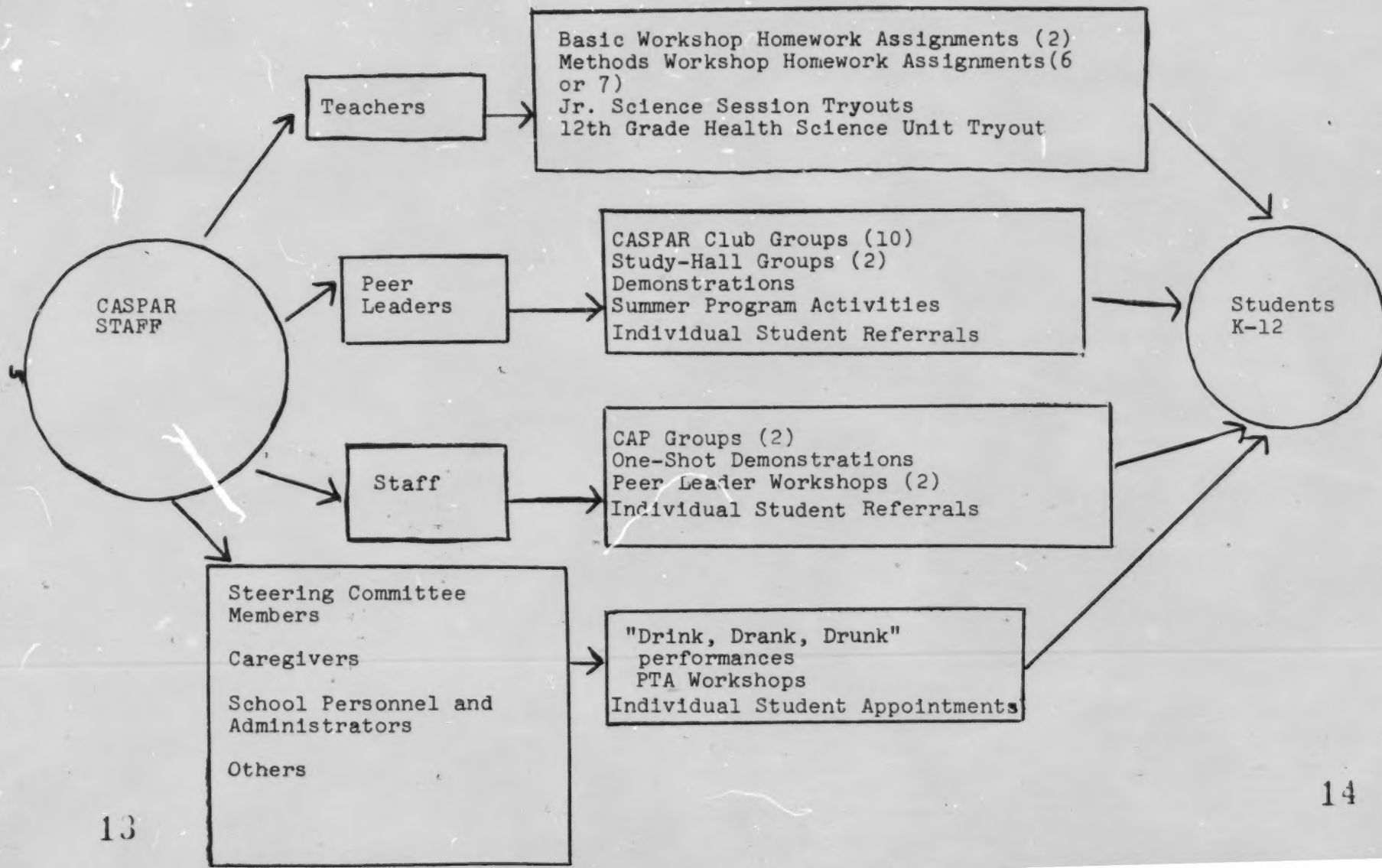


Table II: Basic Workshop Participants by Workshop and Type of School Personnel

Basic Workshop	Teacher	Teacher Specialist ¹	Non-Teacher ²	Administrator	Total
8 (Fall '76)	12	3	0	0	15
7 (Fall '76)	8	3	2	0	13
6 (Spring '76)	3	0	2	0	5
5 (Winter '76)	5	3	3	1	12
4 (Fall '75)	7	0	0	0	7
3 (Fall '75)	11	1	0	0	12
2 (Spring '75)	12	0	0	2	14
1 (Winter '75)	<u>10</u>	<u>2</u>	<u>1</u>	<u>0</u>	<u>13</u>
	68	12	8	3	91

¹Reading teachers, physical education teachers, Title I teachers.

²Librarians, Nurses, Counselors.

Table III: Methods Workshop Participants by Workshop and Type of School Personnel

Methods Workshop	Teacher	Teacher Specialist	Non-Teacher	Administrator	Total
4 (Spring '77)	11	1	0	0	12
3 (Winter '77)	8	1	1	0	10
2 (Winter '76)	8	2	0	1	11
1 (Fall '75)	<u>13</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>13</u>
	40	4	1	1	46

At least twenty-one classes of students (Methods 1 & 2) received six to seven sessions before the curriculum implementation. Another nineteen (Methods 3 & 4) received the same number during the implementation period.

During 1976, six of the eleven CASPAR trained, health/alcohol education mandated teachers in the seventh and eighth grades taught alcohol units in many classes.¹ Each of these teachers had at least four classes of students. Thus, at least 24 classes were exposed to a minimum of one session. Also, the one CASPAR trained, mandated

¹ As part of a Basic Workshop, one mandated teacher taught two sessions that year and another was trained the year after.

teacher in the twelfth grade taught an entire unit with his students. This teacher taught approximately half of the twelfth grade. Although most of these students graduated, there might have been an informal downward flow of information from exposed to unexposed students.

The peer leaders have impacted on students in five formal ways prior to the curriculum implementation. They led ten CASPAR Club groups and two study-hall groups totalling 92 students (approximately 10% participated in more than one group). They led many demonstrations especially in the 11th grade driver education classes and participated in three summer youth program activities. They also met and talked to students who had been referred to the program from the schools or other agencies. The total number of individual students formally exposed to peer leaders is estimated to be in the hundreds.

Staff members led two peer leader workshops and two Children of Alcoholic Parents (CAP) groups totalling 37 students (approximately 20% of whom were in both peer leader training and CAP groups). They also conducted single sessions before several assemblies of 9th graders as resource persons in the "Police and Courts" course in the junior highs and on request for local Catholic schools. In addition they met with students who had been referred to the program from the schools or other agencies.

Finally, the CASPAR steering committee members sponsored several performances of the play "Drink, Drank, Drunk". CASPAR trained caregivers other community members and faculty also met with young people around alcohol-related issues.

Totaling the approximate number of students impacted by each of the above 15 different types of exposure, it is estimated that 3,900 students were in some way exposed prior to the curriculum implementation. Table IV presents the approximate number of students by type of exposure. What the total estimate does not take into account are the amounts of different exposure individual students received and the extent of further exposure through the informal network. For example, in respect to informal exposure, it has been found from a post questionnaire on students who participated in the reliability study on the pre-post test that just taking the test started them thinking and talking about alcohol use and abuse. It is not known if the survey taken by about 1200 had a similar effect though it would seem so.

Curriculum Implementation

The Decisions about Drinking curriculum is a student-centered, school-based curriculum developed and written by CASPAR trained Somerville teachers and staff during the summer of 1976. The curriculum is composed of three major parts. They are: elementary (Grades 3-6), junior high (Grades 7-9), and senior high (Grades 10-12). Each segment has sequential modules that: (1) correspond to each previous grade level; (2) follow a spiral pattern, i.e., for each advancing module similar concepts are repeated in greater depth; and, (3) are designed for ten teaching periods at each grade level with flexibility for expansion or if necessary, contraction (to 5 periods minimum). Each

Table IV: Approximate Number of Students Exposed by Type of Exposure prior to Curriculum Implementation.

TYPE	APPROXIMATE NUMBER OF STUDENTS EXPOSED
<u>Teachers</u>	
1. Basic Homework	1700
2. Methods Homework (1 & 2)	525
3. Junior High Science Session Tryouts	600
4. 12th Grade Health Education Unit Tryouts	300
<u>Peer Leaders</u>	
1. CASPAR Club Groups	81
2. Study-Hall Groups	11
3. Demonstrations	900
4. Summer Program Activities	800
5. Individual Student Referrals	20
<u>Staff</u>	
1. CAP Groups	13
2. One-Shot Demonstrations ¹	650
3. Peer Leader Workshops	34
4. Individual Student Referrals	20
<u>Steering Committee, Caregivers, School Personnel, etc.</u>	
1. "Drink, Drank, Drunk" Performances	150
2. Individual Student Appointments and Referrals	50
	2 5854
	OVERLAP -1932
	<u>3922</u>

¹Includes 500 in the Catholic schools

²Number of students who participated in more than one activity.
Assumed to be around 33%.

module falls into two major subdivisions: alcohol and decision making is covered in the first seven sections and alcoholism in the last three. Each section presents the following: (1) the topic to be covered; (2) the teaching method to be used; (3) the appropriate grade level; (4) time and materials needed (some of the materials are also given); (5) preliminary considerations; and (6) the activity description and the possible variations.

The three stated goals of the curriculum concerning alcohol use and abuse are to:

- (1) expose students to factual information;
- (2) clarify their attitudes;
- (3) increase their responsible decision-making skills.

In order to achieve these goals, especially the last, the curriculum emphasizes high student involvement through varied participation activities such as debates, games, drawing, polls and through small group discussions and role plays focused on life oriented issues and situations. It is assumed that ultimately the changes in the students' facts, attitudes and decision-making behaviors through these school-based approaches will lead to students making more responsible decisions about drinking in and out of school.

The teachers who implement the curriculum are considered the most powerful factor in attaining the curriculum goals. They are primarily responsible for creating classroom experiences that:

- (1) adhere as best as possible to the design of the curriculum modules;
- (2) communicate authentically the program's philosophy;
- (3) facilitate the self-discovery process and,
- (4) encourage students to participate in further follow-up program activities, e.g., CASPAR Clubs.

Because of these important responsibilities, it has been viewed as necessary that the teachers who implement the curriculum be people properly trained by the program.

Of the 82 teachers and teacher specialists trained in the Basics Workshop, 17 participated in the curriculum implementation.¹

Table V presents the teachers who implemented the curriculum organized by grade, sex, Basic training, Methods training, and curriculum development.

Table V: The Number of Teachers who Implemented the Curriculum by Grade, Sex, Basic Training, Methods Training, and Curriculum Development.

Grades	Total Teachers N	Male N	Female N	Basic Trained N	Methods Trained N	Curriculum Development N
7	6	3	3	6	4	2
8	5	1	4	5	4	1
10	3	1	2	3	3	3
12	3	2	1	3 ¹	3	3
	<u>17</u>	<u>7</u>	<u>10</u>	<u>17</u>	<u>14</u>	<u>9</u>

¹One teacher took part in a pre-grant Basic workshop and a Methods workshop during the grant period. Most teachers took Basic II & III and Methods I or II. One eighth grade teacher took Basic VII and Methods III.

¹Two took pre-grant Basic workshops of whom one took the Methods workshop during the grant period. The other had taken an advanced workshop prior to the grant and was a Steering Committee member during the grant period. She was one of the teachers eliminated from consideration (see below). More teachers volunteered but couldn't participate because of schedule constraints or because they had tried out some of the materials with their students as part of a workshop earlier in the year. Four trained teachers actually participated but have been eliminated from consideration in this report. A seventh grade teacher was dropped from the analysis because she implemented the curriculum testing supplementary activities with two classes of students who had already been exposed in an earlier curriculum cycle. Two eighth grade team teachers taught the curriculum materials and to reduce confusion and redundancy the assigned head teacher was kept in the sample. Two ninth grade teachers also taught as a team but failed to provide sufficient data to be included in the sample.

Of the 17 teachers who participated in the implementation, 14 had taken Methods and nine had helped to write the curriculum. All of the grades had a good representation of Methods trained teachers; the eighth grade had the fewest teachers who had helped to write the curriculum. All of the 10th and 12th grade teachers taught in the Somerville High School. Two seventh grade teachers came from each of the three junior highs: Northeastern, Southern, and Western. Three of the eighth grade teachers taught at the Northeastern, two at the Southern, and none at the Western.

Junior and senior high teachers were focused on mainly because of the health education mandate for grades 7, 8, and 12.

Table VI presents the number of Somerville teachers responsible for meeting the mandate categorized according to level of CASPAR training and curriculum implementation.

Table VI: Somerville Mandated Teachers Categorized According to Grade, Training, and Curriculum Implementation.

<u>Mandated Grades</u>	<u>Mandated Teachers N</u>	<u>Basics N</u>	<u>Methods N</u>	<u>Curriculum Implementation N</u>	<u>Curriculum Implementation %</u>
7th	6	6	5	5	83
8th	6	5	3	3	50
12th	<u>2</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>50</u>
TOTAL	14	12	9	9	64

Of the fourteen teachers responsible for meeting the mandate, 12 were trained by CASPAR nine of whom (64%) volunteered to implement the curriculum. These nine teachers make up a little more than half of the seventeen teachers who participated in the implementation.

All the students exposed during the curriculum implementation, therefore, were junior and senior high public school students. Table VII presents a breakdown of the student population by school type, the exposure to the curriculum and those with pre-to-post test matches.

As a result of the curriculum implementation with the first year's target population, twenty-nine percent of all junior and senior high students and 47% of all those in the mandated grades, 7, 8 & 12 were exposed.

Table VII: Breakdown of Student Population by School Level, Students Exposed to Curriculum, and Study Sample Size.

Public Schools	Students N	Students Exposed N	Study Sample Size N	Exposed to Total Students %
Senior High	2890	664 ¹	386	23
Junior High	2784	984	240	35
Elementary	<u>6102</u>	<u>-</u>	<u>-</u>	<u>-</u>
TOTAL	11,776	1648	626	14

¹Twenty-one Trade School students were taught by two peer leaders

In the groups sampled, 5.5% of the students reported significant previous contact with a peer leader on their pre-tests while 34% reported having had at least one previous session on alcohol education. Though the sample groups were not randomly chosen but selected by a "best" and "worst" group procedure by teachers, the size of the sample (38%) makes it highly probable that it is representative of exposed students. Thus, if the group sampled is considered somewhat representative of those students exposed at least one of every three students exposed to the curriculum had already been somewhat exposed to the content or activities. This does not necessarily mean in all instances exposure by CASPAR trained teachers. However, a close examination of the teacher names mentioned by students shows that 89% of the teachers mentioned were CASPAR trained as is shown in Table VIII.

Also, if one examines the ratio of CASPAR trained teachers named to number of students pre-tests (taking into account the fact that some students named more than one teacher), the 7th and 10th grades were very similar and much lower than the 8th and 12th grades.

In sum, the two important points about the students prior to taking part in the curriculum implementation are:

- (1) A large number had already been exposed to the concepts or material; and,
- (2) Eighth and twelfth graders appear to have had more prior exposure than 7th and 10th graders.

Table VIII: Breakdown of Teachers Named by Students on Previous Exposure According to Grade and CASPAR Training.¹

Grades	Student Pre-test N	Total Number of Teachers Named N	Total Number of Teachers Named who are CASPAR Trained ² N	Percent of CASPAR trained of total Named Teachers %	Ratio of CASPAR Trained Teachers to # of Student Pre-tests ³ N
7	119 ⁴	48	37	77	.31
8	225	129	127	98	.56
10	159	55	47	85	.30
12	<u>124</u>	<u>69</u>	<u>56</u>	<u>81</u>	<u>.45</u>
	627	301	267	89	.43

¹ Does not take into account number of sessions they had with the teacher. They tended to have more sessions with CASPAR trained teachers.

² Includes Health Education classes (25% of teachers named in the 12th grade) "Police and Courts" groups (4% of teachers named in 10th grade).

³ Some students mentioned more than one teacher

⁴ Does not include Cycle I students whose questionnaires didn't have this question on previous exposure.

In respect to the latter point, what conventionally would be expected is a linear increase with advancement in grades; however, as Table VIII demonstrates there is more reported prior exposure by CASPAR trained teachers in the 8th and 12th grades than in the 7th and 10th grades. This result is predictable from what has been shown concerning the program's activities up to that point. In the sixth grade, the 7th graders would have had less CASPAR exposure because the program had focused its activities on the junior and senior highs due to the mandate. There were only two trained 6th grade teachers prior to 1976 and they had access to only two classes of students. On the other hand, the majority of eighth graders had at least one session with CASPAR trained teachers in the 7th grade as has been shown. In their 9th grade, 10th graders would have received less exposure because again the program focused on the 7th and 8th graders in the first year of the mandate ('75-'76). The twelfth graders' reports would be higher because the program participated in the driver's education classes taken by a majority of the students in the 11th grade. Peer leaders taught the alcohol lessons in these classes.

CHAPTER II

ALCOHOL AWARENESS EDUCATION

The purpose of this chapter is to present a conceptual view of the phenomenon under investigation; namely alcohol awareness education as conducted by the CASPAR Alcohol Education Program. Essentially, the conceptual view to be presented in this chapter is based on cognitive theories of learning, attention, information processing and perception (see Norman, 1975) and see the primary functions of alcohol awareness education as being:

(1) The reduction of informational ambiguities and misconceptions; namely, the promotion of structured, coherent, and internally consistent knowledge and attitude schemas in the learner;

(2) the introducing of various issues, concerns, behaviors and practices into the focal attention of learners in order to (a) desensitize certain learners in terms of various issues and concerns and (b) sensitize other learners in terms of various issues, behaviors, and practices;¹ and

(3) the brokering, transfer, or mediating of certain students to more prolonged, sophisticated, intense and specialized agencies of intervention.²

It should be somewhat obvious to the reader that the view outlined above does not see alcohol awareness education, or awareness education of any kind for that matter, as being a very "powerful" change agent in the relative or ultimate sense of the term. Rather, the view outlined above sees alcohol awareness education as being no more than an initial stimulus or catalyst in a multi-stepped change process. Alcohol awareness education, therefore, is a relatively weak but necessary change agent in a much longer and more complex change process; namely, it is the intentional initial stimulus that energizes and begins the processes of change.

¹Individualized sensitizing and desensitizing activities, it should be noted, are but reverse sides of the selective attention and perceptual processes that govern all human information processing (i.e. knowledge, opinions, and actions). The function, therefore, is one of developing an appropriate level of sensitivity or readiness to begin learning.

²This third function may be seen as one of brokering or transferring certain students from primary to secondary modes with intervention, or from low or marginal activity states to high or proactive activity states. Whichever view is taken, the function is one of mediation from one state to another; namely, the effect is the mediator or the mediation rate across students and activities.

The conceptual view of alcohol awareness education outlined above, it should be noted, is in no way belittling or demeaning, as all change processes need their catalysts. Rather the view is exceedingly realistic in terms of what is known about learning and behavioral change and what is done in terms of awareness education activities of all kinds. If an alcohol awareness education program achieved either of the first two goals outlined in this chapter, it would have more than successfully carried out its mission as the initial stimulus of change. If, however, an alcohol awareness education program could also achieve the third goal outlined (namely, brokerage of students to other more powerful agents of change), then little more could realistically be asked of the program in terms of conceptually important and deliverable functions.¹

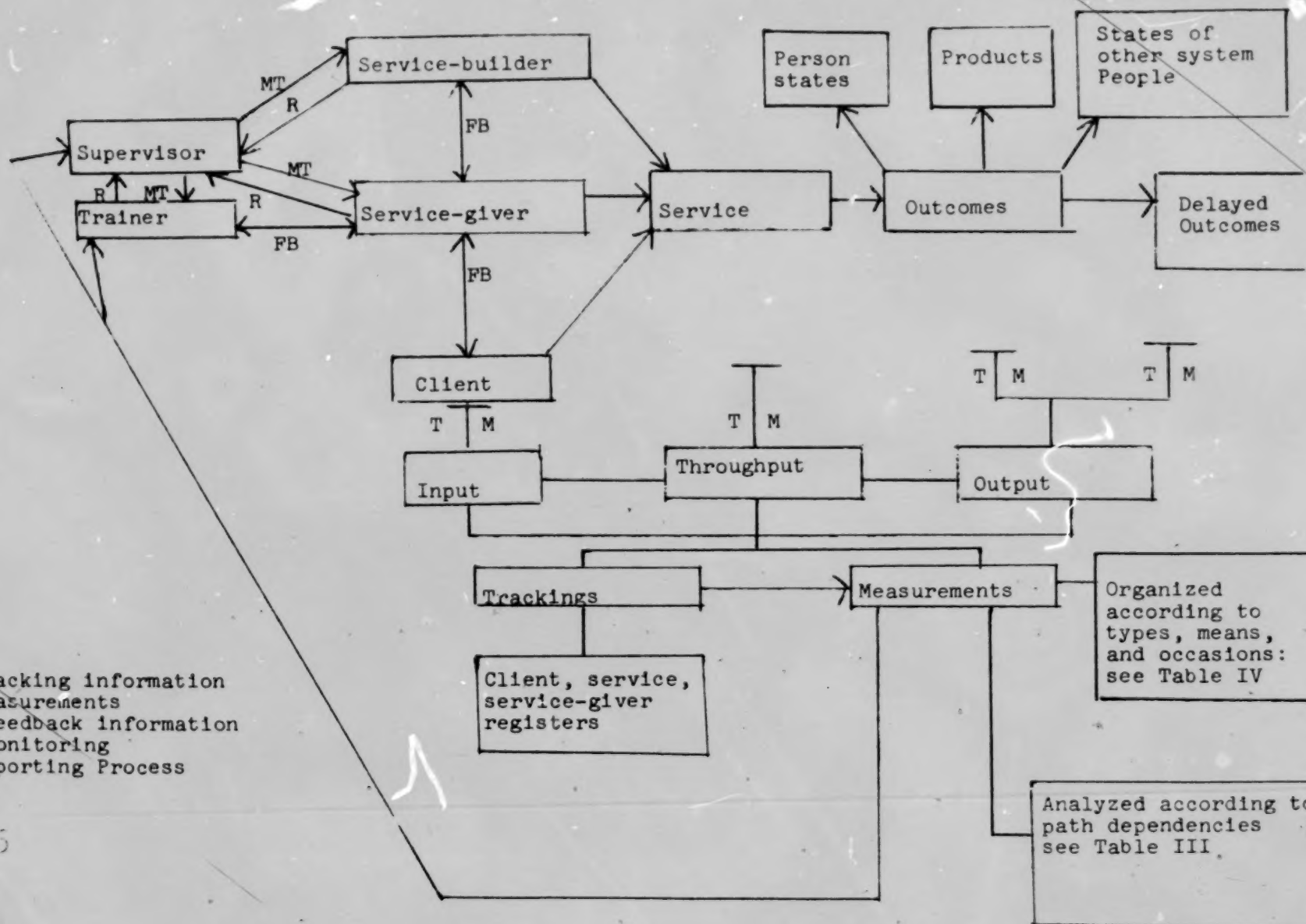
Due to the time constraints affecting the preparation of this report, the conceptual view of alcohol awareness education outlined cannot be more fully elaborated for the reader at this time. The reader, therefore, is referred to Chapters IV, V, VI, and VIII for more specific details on what has been said. A word does need to be said at this time, however, about how the conceptual view of alcohol awareness education outlined above affects program evaluation.

A program, program component, or curriculum is, at any level of conceptualization one chooses to work at, a linked system of inputs (student parameters), throughputs (treatment or instructional parameters), and outputs (outcomes or effects parameters). What might be termed classical or traditional evaluation methodologies have tended to ignore the importance of these linkages in the analysis of program effects due primarily to their reliance on controlling rather than measuring input and treatment parameters. Since the loss incurred in neglecting system linkages is empirically considerable, more contemporary evaluation theorists have tended to utilize some form of what has come to be known as the General Linear Model in assessing curriculum or intervention effects in live field situations. Essentially, this approach involves measuring or tracking input and throughput parameters and then using these measurements as covariate or partitioning variables in the assessment of effects.

For example, degree of program implementation (namely, amount of treatment received as intended) was found by Johnson (1975) to be the most significant predictor of learning in a nationally implemented early childhood education program. Wiley (1974), on the other hand, found that learning from instruction was best explained by the amount of time students spent studying content that was actually new to them. In the first example, a throughput parameter was the best predictor of outcomes, while in the second example an input and a throughput parameter interacted to produce the outcomes observed. Such intervention effects would have either been missed or masked if a classical input-output evaluation model had been employed in either of the two cases cited.

¹Increased consumption or disinhibition effects, it should be noted, are not necessarily negative outcomes for an alcohol awareness program when the program is viewed in terms of a responsible decision making model. Decreases in consumption, moreover, are not necessarily "good marks" for the program either. The conceptual issues are just not that simple (see DiCicco and Unterberger, 1968, 1973, 1977 for further details.)

Figure 2: An Information Collection Model for the Caspar Alcohol Education Program.



Conceptually, the details of the general linear model view of program evaluation can be both characterized and conceptualized as given in Figure 1. Although extremely au courant, the points the evaluators would like to make about Figure 1 are as follows:

(1) The evaluation model outlined in Figure 1 embodies a very static view of the instructional process and this is its major weakness in both detecting and explaining intervention effects; and,

(2) Intervention effects in many situations and with many types of instructional experiences might not be dependent upon either input or throughput parameters as they are conventionally conceived of by advocates of the evaluation model presented in Figure 1, but rather intervention effects may be primarily dependent upon whether or not certain critical incidents occur for a student during the course of instruction. In fact, the occurrence or non-occurrence of critical incidents may itself be the program effect and the primary causal agents in terms of brokering students from primary to secondary intervention sources. This critical incidents dimension, therefore, is an awareness education outcome that must somehow be "added in" to whatever evaluation model one chooses to use. This "adding in" of the critical incidents dimension, however, necessitates adopting a somewhat different view of program evaluation.

The view of program evaluation outlined above sees instruction, but particularly awareness instruction, as being a set of experiences or events that have some known or unknown probability of triggering desired incidents in terms of both student and teachers and their interaction. Conventional program outcomes such as information acquisition and attitude change and unconventional program outcomes such as seeking further help, joining specialized groups, or adopting new views and behaviors may be more a function of whether or not critical incidents occurred for a student during the course of instruction than any other particular variable. Minor critical incidents, moreover, might be the precursor of more major events, and there might even be a pattern or set of patterns to such progressions. In fact, the value of a particular set of awareness experiences may not be their ability to transfer information and change attitudes, but rather the value of such experiences may be their ability to trigger critical incidents in both students and teachers which in turn then lead to other sets of experiences that are more powerful agents of desired change. It is this view of program evaluation, therefore, that will be more fully developed in Chapters IV and VIII, after the more conventional dimensions of program evaluation methodologies and models have been dealt with.

CHAPTER III

THE SEQUENTIAL CYCLES APPROACH TO PROGRAM EVALUATION

Field-based evaluation involves application of at least seven basic principles. These principles are:

(1) Conceptualization: Statistical techniques and experimental methodologies operate by comparing observations against expectancies. Consequently, what should be observed and what should be expected is the first and most basic question that needs to be answered in terms of conducting an evaluation. Although seemingly simple, arriving at an answer to this most fundamental of questions is by no means an easy task, as it requires three different-but-yet-sequentially-dependent macro-level theories (see Suppes, 1975). These macro-level theories are (1) a theory of the program and the phenomena under investigation, (2) a theory of the class of experiments or designs that will generate appropriate observations about the theory of the program and the phenomena under investigation, and (3) a theory of the data that is generated by the theory of design employed. Three macro-level theories or conceptual frameworks, therefore, must be decided upon and established operationally simply to begin the process of conducting an evaluation. The quality of the resulting evaluation, moreover, will be dependent upon the appropriateness of the macro-level decisions that are made.

(2) Sound Instrumentation: Since the comparison of observations against expectancies can only be done through concrete instrumentation, the principle of sound instrumentation is of critical importance to field-based evaluation. Three types of soundness, however, must be present in a field evaluation instrument. The first is psychometric soundness; namely, that the instrument employed measure the variable of concern reliably and validly enough to permit hypothesis testing. The second is criterion soundness; namely, that the instrument employed measure, where appropriate, the objectives of the intervention or program and not some hypothetical variable or generic construct. The last requirement is conceptual soundness; namely, that the instrument employed have a stimulus and response topology that is congruent with the theory of the program and the theory of the phenomena under investigation. Sound instrumentation as outlined here, therefore, is somewhat different from the concept of sound instrumentation as classically conceived in the test and measurement literature.

(3) Micro-Level Design: Since field-based evaluation is almost by definition quasi-experimental in nature, it must employ principles of micro-level design to compensate for its many uncontrollable imperfections. Essentially, micro-level design is building in systems of information redundancies, checks, and cross-validations on the noisy or problematic elements in one's macro-level evaluation. Micro-level design calls for conducting subexperiments if necessary to settle moot points. It attempts to gain fidelity of phenomenological capture for the purpose of empirically deducing best estimates, verifications, and probabilistic approximations. Micro-level design, therefore, is measuring or generating information on what cannot be decomposed, manipulated or controlled so that these factors can be dealt with either analytically or logically in the interpretation of the data.

(4) Replication: Since field-based evaluation is almost by definition quasi-experimental in nature, it should employ the principle of replication wherever possible. Several repeated weak instances of a finding (or a linear trend among findings) probabilistically yields stronger evidence for the finding than any of the individual instances alone. Replication, therefore, is another way of compensating for weak and imperfect designs.

(5) Indexing: Since one is pushed toward employing micro-level design procedures in field-based evaluation, indexing becomes an important principle pragmatically. Indexing refers to the empirical act of using multiple weak measures and information to create probabilistically stronger measures and design factors where possible (see Campbell and Webb, 1974). Indexing, therefore, is data reduction for the sake of simplicity, parsimony and strength.

(6) Abstraction: Since one is pushed toward employing micro-level design procedures in field-based evaluation, abstraction becomes an important principle epistemologically. Abstraction is the conceptual act of deriving the highest level macro-design that may be reasonably employed for the phenomena under investigation, given the micro-level imperfections of the data and methodology utilized. Abstraction is reduction for the sake of generalizing. And last,

(7) Boundary and Effects Estimation: Since field-based evaluation is almost by definition focused on the untried, examining the boundaries and range of intervention effects becomes critically important. One, therefore, must attempt where possible to examine the phenomena under investigation across levels of variations and conditions so that the limits and scope of the generalizations made may be identified.

Applying the seven field-based evaluation principles outlined above is a difficult task, even in a well-defined and well-developed (in the empirical and technological sense of the terms) area. Applying these seven principles in a relatively undefined and undeveloped area, however, is an extraordinarily difficult task. The evaluation problems faced by the CASPAR Alcohol Education Program need to be clear if one is to understand the methodological solutions devised for these problems by the evaluators. Clarity on these problems, moreover, will also allow one to understand how the solutions devised articulate with and incorporate the principles of field-based evaluation as outlined above.

The initial evaluation problems faced by the CASPAR Alcohol Education Program were as follows:

(1) No enabling technology to permit the assessment of change: due to the requirements of confidentiality, the program initially had no way of connecting pre and post measurements on subjects and thus no refined way of assessing change.

(2) Volunteerism of curriculum implementation: allowing for teacher freedom in scheduling, the program did not dictate which trained Somerville teachers would or would not implement the CASPAR curriculum in their classrooms, or what they would implement with whom and when. This factor introduced a strong element of unpredictability

that made design control and overall planning quite difficult. This factor also introduced a requirement of closely tracking and documenting curriculum implementation activities so that a finalized macro-design could be inductively arrived at from what was ultimately available.

(3) An evaluatively unspecified curriculum: an initial logical analysis of the curriculum materials to be tried out by teachers revealed that what could evaluatively be said to constitute a definitive exposure to the CASPAR model was relatively unclear as was the articulation between exposure levels and outcomes. This factor introduced a need for the establishment of definitive exposure and outcome specifications.

(4) A criterion instrument of unknown quality: The criterion instrument available for use in assessing the effects of the CASPAR curriculum was initially devised by the program staff and a few trained teachers. This instrument's degree of reliability or criterion-related validity were unknown quantities. Initial inspection of this instrument also suggested that there might be intervening variables affecting responses. No suitable technology was available, however, for measuring these intervening variables.

(5) Untracked Prior exposure: Prior exposure of students to CASPAR materials and activities was considered to be of particular importance for a variety of reasons. This variable, however, had only been loosely tracked by the program historically. Whether home exposure to alcohol education, or other sources of exposure, were equally or more important than CASPAR exposure was also unknown. An adequate technology for capturing kind and degree of prior exposure across grade levels, moreover, was also lacking. And,

(6) Marginally capturable mediational outcomes: From the initial conceptualization work done, a strong suspicion emerged that the mediational outcomes of the CASPAR curriculum might be far more important evaluatively than its knowledge or attitudinal impact. An adequate technology for capturing these mediational outcomes, however, was lacking.

Since many methodological problems can rarely be solved simultaneously, the way in which the problems outlined above were pragmatically addressed was through use of the Sequential Cycles Model of Program Evaluation (Glass, 1976). Essentially this model's approach to program evaluation is to attack the problems one is faced with a few at a time and then overlay the solutions found on the entire design wherever such overlaying can be reasonably justified. The way in which this overlaying is achieved is by conducting a series of micro-evaluations. Each micro-evaluation or cycle focuses on beginning the process of solving a problem that prevents summative or confirmatory evaluation from being done while at the same time conducting summative or confirmation evaluation wherever possible. Subsequent cycles always seek to replicate the important findings of prior cycles and to incorporate the best state-of-the-art methodological answers found. Therefore, through a series of overlaid micro-evaluations one successively approximates, in the probabilistic sense of the term, the evaluation one would like to have conducted if circumstances had permitted.

The sequential cycles approach to program evaluation is not without its problems. The most important of these problems are as follows:

(1) Due to the initial weaknesses of the dependent variable measures available in the present instance and the need to improve them, a domain-referenced view of measurement must be adopted to make conceptual sense of the data collected across successive cycles (see Hivley, 1972 and Johnson, 1974). Essentially this view of measurement sees individual test items as both exemplars and estimators of a subject's status or attainment level in terms of a particular domain of interest rather than as isomorphic instances of some homogeneous construct. According to this view, individual test items, aggregates of test items, and overlapping aggregates of test items are either good or bad estimators of status or attainment levels in terms of the domain of interest. If this view is adopted, the central question becomes one of goodness of estimation between item aggregates and not one of psychometric or isomorphic equivalency. This question, however, may be answered by both logical and empirical means and poor estimators eliminated or accounted for in other ways as long as the total number of items responded to by any given subject is controlled for through scaling.

(2) What has been said above about dependent variables in the present instance also holds for several of the design variables that were scrutinized. Again a domain-referenced point of view must be employed to make sense of some of the data collected across successive cycles. To facilitate this process, macro-design factors have been made as parsimoniously categorical as possible to reduce classification errors and comparability problems. In these particular cases design variable measures must be seen as probabilistic estimators of macro-category membership.¹

(3) The collection of different data on different subjects in different cycles leads to external validity problems in some instances which must be carefully considered before drawing conclusions; and last,

(4) The collection of different data on different subjects in different cycles leads to internal validity problems that must be cross-checked and settled empirically before drawing conclusions.

As stated above, the sequential cycles approach to program evaluation is not without its problems. The model's primary advantage is its ability to proceed in the face of multiple obstacles. The model's primary disadvantage is its probabilistically fitting overlays and higher-level design categories. The model's ability to successively

¹See Kantman (1975) on the Theory of Fuzzy Sets for both the logical and mathematical foundations of this type of overlaying.

incorporate better technology and methodology into a continually improving design is a strength offered by few evaluation approaches. The model's inability to answer all or even any questions definitively is a weakness not present in a number of other approaches. Seen at its best, the sequential cycles approach cumulatively yields a weak first-order approximation of strong confirmatory evaluation. Seen at its worst, the sequential cycles model yields stronger first-order approximations of employable evaluation technology and exploratory if not confirmatory findings on the phenomena under investigation. Seen from both points of view at once, the Sequential Cycles Model of Program Evaluation has weaknesses, but it also has a great number of strengths, particularly in methodologically difficult, undefined, and open-ended situations.

To facilitate a fuller understanding of this chapter and the next, a brief description of the foci of each of the micro-evaluation cycles conducted will be given as orientation to the actual flow of the development and replication process. In micro-evaluation cycle 1, the problems of connecting pre to post responses, capturing the effects of sources of prior exposure, describing the type of intervention received, and upgrading knowledge and attitude measures were attacked. In micro-evaluation cycle 2, the problems of developing a short-form social desirability measure and a critical incidents capturing methodology were attacked along with further revision efforts on the problems addressed in cycle 1. In micro-evaluation cycle 3, the problems of integrating prior revisions and instrument reliabilities were attacked, and this cycle brought about a finalized design. In micro-evaluation cycle 3a, a rival curriculum in another city in Massachusetts was evaluated using the cycle 3 design employed in Somerville. And last, in micro-evaluation cycle 4 the micro-evaluation design used in cycles 3 and 3a was replicated in Somerville.

In Chapters I and II of this report, theories of the program and the phenomena under investigation were given. In this chapter, a theory of the class of designs that would generate appropriate observations about the theory of the program and the phenomena under investigation was given along with the initial elements of a theory about the kind of data that would be generated by these designs. In the next chapter, a description of the actual methodology employed will be given, and certain elements of this chapter will be expanded; namely, the theory of the data generated by the designs employed.

CHAPTER IV

METHODOLOGY

As previously stated, a sequential cycle evaluation model was used by the CASPAR Alcohol Education Program to assess the impact of its school-based curriculum (see Chapter III for details). Overall, five major micro-evaluation cycles and four minor micro-evaluation cycles were conducted between December 9, 1976 and June 13, 1977. The dependent variables that were examined in these micro-evaluation cycles were:

- (1) Changes in knowledge and attitude levels on a pre to post basis;
- (2) Changes in situation-identification items on alcohol use and abuse;
- (3) Ratings of selected process variables by students;
- (4) Ratings of selected process variables by teachers; and,
- (5) The frequency and rate of critical incidents observed in the classroom by teachers within the intervention time span.

The design factors or variables that were employed in each of the five major micro-evaluation cycles conducted were:

(1) The pseudonym (CDRGP) technique: a data collection procedure developed by CASPAR which allowed each student to generate a unique code name that ensured response confidentiality but which at the same time made responses connectable on a pre to post basis (see Carifio and Biron, (in press));

(2) Student sex and teacher sex: for students this factor was built into the CDRGP technique; for teachers it came from their instructional process logs. This factor was considered to be important in terms of model hypotheses (see Bandura and Walters, 1975);

(3) Grade level of the student: Developmentally, this variable was considered to be important in terms of degree of socialization. Historically, the variable was considered to be important in terms of areas of prior program impact;

(4) Group: Each teacher who tried out the CASPAR curriculum was asked to select his or her best and worst group of students in terms of teaching alcohol-related content. The teacher's best group of students (namely, A group) was designated as the upper limit estimator of program impact, and the teacher's worst group of students (namely B group) was designated as the lower limit estimator of program impact. When combined, these two groups of students (A and B) produce average estimates of impact on all students taught by the teacher.

The group variable and extremes sampling procedure was also employed in assessing the impact of the rival curriculum evaluated, but it could not be directly tied to specific interveners or experiences as will become apparent when this rival curriculum is described. Operationally, academic ability and degree of school attendance seemed to be the characteristics that distinguished A from B group students in both communities.

(5) Kind and Level of Prior Exposure: This design factor was considered to be important for a variety of reasons, the first being the separation of naive from pre-familiarized students (see Tobias, 1973), and the second being the identification of students previously impacted. This design factor proved to be a difficult one methodologically (being based on different kinds of estimators and student self-reports across the cycles), and it had to be disaggregated into three correlated subvariables which were then logically combined into probabilistic exposure categories. The specific details of this reduction process are given in the sections on instruments, instrument scoring, and indexing in this chapter.

(6) Type of Intervention: Since teachers implementing the CASPAR curriculum did not have to conduct a standard or homogeneous form of intervention, this design variable was introduced to gain control on this factor (see Johnson, 1974). Three intervention-type categories were established on this factor for the purposes of data analysis. The first category was called Proper Implementation of the CASPAR Curriculum (PICC), the second Improper Implementation of the CASPAR Curriculum (IICC), and the third Reception of the Rival Curriculum (RVCR). The criteria that were used in making assignments to these categories were:

- (1) that the teacher taught at least five curriculum sessions to two groups of students at the same grade level;
- (2) that the teacher included sessions on facts, attitudes, alcoholism, and decision-making among the sessions tried out;
- (3) that the teacher used small group discussions and/or a roleplaying technique in his or her teaching;
- (4) that the teacher did not use unapproved films, speakers, materials, or teaching methods;
- (5) that the teacher did not teach the sessions on alcoholism before the sessions on drinking; and,
- (6) that the conditions of teaching during the teacher's implementation of the curriculum were reasonably adequate.

The data that were used to arrive at individual type of intervention classifications came from the process logs each teacher filled out after each teaching session. Further information on this design factor is given in the sections on instruments and indexing in this chapter.

(7) Social Desirability: Due to the content being measured and the response topologies employed, this variable was considered to be important in terms of both understanding and gaining control over possible intervening factors influencing students' test responses. A full explanation of this design factor must be postponed until Chapter 5 (Psychometric Findings). However, it may be said at this time that social desirability as measured by the reduced Crandall scale is construed by the evaluators to be primarily an index of a student's tendency to guess under the conditions of being able to answer "not sure" or "don't know." In other words, SD is a measure of a student's general test-taking set or behavior under certain response conditions. Other interpretations of this variable, of course, are also possible.

Designs, Instruments, and Selected Methodological Findings

Table I presents a summary of the instruments, instrument forms, and collection schedules employed in each of the micro-evaluation cycles conducted. A number of points should be noted in terms of studying the information given in Table I. These points are:

(1) A form of an instrument is a version or variant of a procedure which is aimed at measuring a particular generic variable. Forms of an instrument may vary in number of items, item wordings, items, or response topology. All forms of an instrument, however, are directed at measuring the generic variable specified;

(2) The basic evaluation design used in each of the micro-evaluation cycles conducted was to have each teacher select his or her best (A) and worst (B) group of students for the purposes of evaluation. Group, therefore, is the basic sampling unit, and the overall sampling model is purposeful rather than random in nature;

(3) Since version of the curriculum taught by any teacher or teachers could not be controlled (see Chapter III) and is confounded with cycle (see Table X), teacher is the sampling unit for type of intervention (PICC, IICC, or RVCR). This fact poses only somewhat of a minor problem as intervention is defined by CASPAR as being a combination of both teacher and methods (see Chapter I for details). Students, however, are not randomly assigned to type of intervention (see Table XI), and this fact does pose a major evaluation problem that can only be controlled statistically in analyses (see Chapter VI for details).

(4) Grade as a factor in the across-cycles design is neither purposeful or random. Grade, moreover, is not completely crossed and is partially confounded between the two communities (see Table II).

(5) If one attempts to view the overall evaluation design employed from the point of view of the student as the fundamental conceptual unit, one will encounter nine levels of nesting and three levels of confoundings in terms of estimating effects. If, however, one views the overall evaluation design employed from the point of view of groups as the fundamental conceptual unit, one will see that the design is

Table I

Summary of Instruments, Instrument Forms, and Data Collection
Schedules Across Micro-Evaluation Cycles

<u>DATA TYPE</u>	<u>Cycle</u>					<u>RVCR(3a)</u>
	<u>1</u>	<u>2</u>		<u>3</u>	<u>4</u>	
		<u>JH</u>	<u>SH</u>			
I. <u>Pre</u>						
A. Prior Exposure	Ia	II	II	II	II	Ia
B. Social Desirability	Ia,b			Ia	Ia	Ia
II. <u>Pre and Post</u>						
A. Fact and Attitude Items	I	I	II	IIIa	IIIb	IIIb
B. Alcohol Use and Abuse Items	I	IIa	IIb	IIIa	IIIb	IIIb
III. <u>Over Sessions</u>						
A. Student Ratings	Ia	Ib	Ib	IIa	IIb,c	IIb
B. Teacher Process Log:						
1) Session Description	Ia	Ib	Ib	II	II	
2) Session Ratings	Ia	Ib	Ib	IIa	IIb	
3) Critical Features		Ia	Ib	Ib	Ib	

JH = Junior High Schools

SH = Senior High

A comma means two forms employed

crossed in terms of teacher, cycle, grade-level, form and type of intervention. Group, therefore, is the fundamental first-order control factor in the overall design employed, and must conceptually be construed as such for the purposes of statistical analyses and the estimation of effects;¹ and,

(6) Since the across-cycles methodology employed in the present evaluation is so variable and embedded, the strategy that will be adopted in this chapter is as follows:

(a) general aspects of the overall design will be described first to familiarize the reader with the larger aspects of the across-cycles view;

(b) Instruments, instrument forms, findings and scoring procedures will be presented next as units so that as much important and related methodological information as possible is presented together in one place;

(c) the detailed methodologies of each micro-evaluation cycle will then be presented so that the anomalies of each cycle may be identified and the rival curriculum described; and,

(d) the procedures used to index data for the purposes of analyses will then be described so that they may be outlined more parsimoniously.

Table II presents the total number of students who were exposed to instructional sessions by community and grade. Table III presents the data given in Table II in terms of total number of groups. As can be seen from Tables II and III, the percentage of students exposed to instruction in Somerville decreased with grade, whereas 100% of the RVCR students were exposed to instructional sessions assuming no absenteeism. The lower grades in Somerville, however, it should be noted, were close to 100% exposed when only the junior high schools at which sessions were actually taught are used to obtain exposure percentages, thus creating a partial grade-level equivalency on this factor between the two communities.

¹The nestings and confoundings in the overall design are as follows. Students are nested within groups and groups are nested within teacher. Teachers are nested within grades, cycles, and type of intervention. Type of intervention is nested within cycles, forms, grade-level, and community. Teachers are confounded with type of intervention and type of intervention is confounded with forms and grade. This design simply cannot be viewed from the point of view of the student as the fundamental conceptual unit. Using group as the first-order control factor in analyses, therefore, removes the effects of both the nestings and the confoundings in the estimation of effects, if step-wise analytical procedures are employed.

Table II

Total Number of Students Exposed to Instruction by Community and Grade.

	<u>Somerville*</u>		<u>RVCR</u>	
	<u>Exposed</u>	<u>Grade %</u>	<u>Exposed</u>	<u>Grade %</u>
7	575	62	505	100
8	379	52	548	100
9	-	-	470	100
10	378	40	-	-
12	265	39	-	-

*Somerville percentage based on all junior high schools in the Somerville system.

Table III

Total Number of Groups Exposed to Instruction by Community and Grade.

	<u>Somerville</u>		<u>RVCR</u>	
	<u>Exposed</u>	<u>Grade %</u>	<u>Exposed</u>	<u>Grade %</u>
7	24	66	20	100
8	12	50	22	100
9	-	-	19	100
10	11	30	-	-
12	11	42	-	-

Table IV

Number of Students Pretested by Cycle, Community, and Grade

<u>GRADE</u>	<u>Cycle</u>				<u>RVCR(3a)</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	
7	93	35	50	54	90
8	-	92	67	65	104
9	-	-	-	-	94
10	-	161	-	-	-
12	-	34	32	58	-
TOTAL	93	322	149	177	288

Table V

Percentage of Students Not Pretested due to Absenteeism on the Pretesting Day by Cycle, Community and Grade

<u>GRADE</u>	<u>Cycle</u>				<u>RVCR(3a)</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	
7	17%	15%	4%	12%	12%
8	-	4%	8%	9%	14%
9	-	-	-	-	12%
10	-	10%	-	-	-
12	-	6%	6%	3%	-
TOTAL	17%	8.8%	6%	8.3%	13%
GRAND TOTAL: 10.5%					

As can be seen from Table IV, the total number of students pre-tested is large and relatively equally distributed across cycles, communities, and grades.

Table V presents the percentage of A and B students who were not pretested due to absenteeism on the pretesting day by cycle, community, and grade. As can be seen from Table V, 10.5% of A and B students were absent on the pretest day, which is about the average figure that tends to be observed in most urban and suburban school systems.

Table VI presents the total number of students for whom matchable pre and post data were available by cycle, community, and grade. Table VII presents the data given in Table VI in terms of numbers of groups, and Table VIII presents the data given in Table V in terms of pre to post mortality rates. As can be seen from Tables VI and VII, both the number of matchable pre to post students and the number of groups from whom data were obtained are relatively equally distributed across cycles, communities, and grade. As can be seen from Table VIII, the pre to post test mortality rates ranged from a low of 3% to a high of 24% giving an average overall mortality rate of 13.4%. All mortality rate estimates, however, come out between 20 and 25%, if the maximum number of students who could have been present in the classroom is used to compute the percentages. When the latter figure is used, there is far less variance between the percentages given in Table VIII.

Analyses of the mortality rates by major design factors revealed that the loss rates seemed to be random with the following exceptions in both Somerville and the RVCR community. Male mortality rates were higher than female and B group higher than A. These two factors, however, were confounded and produced interaction effects due to the true mortality rate effect coming from the high loss of B group males.¹ When sex was dropped as a factor, both the effects and interactions disappeared (see Chapter V for further details).²

¹The only reasonable explanation of this outcome is that B group males are more marginal school attenders and thus more inaccessible.

²Twenty-two students for whom connectable pre to post data were available were dropped from the Somerville sample in doing pre to post analyses due to perfect pretest scores. All of these students were high CASPAR exposed students and over half had been in CASPAR club groups. No rival curriculum students were dropped from analyses as none had perfect scores (see Chapter VII for further details).

Table VI

Number of Students for whom Matchable Pre and Post Data were Available by Cycle, Community, and Grade.

<u>GRADE</u>	<u>Cycle</u>				<u>RVCR(3a)</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	
7	81	34	48	46	80
8	-	81	53	58	90
9	-	-	-	-	85
10	-	149	-	-	-
12	-	26	26	46	-
TOTAL	81	290	127	150	255

Table VII

Number and Percentage of Groups from whom Matchable Pre and Post Data were Available by Cycle, Community, and Grade.

<u>GRADE</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>RVCR(3a)</u>
7	4(40%)	2(50%)	4(50%)	3(60%)	4(20%)
8	-	6(50%)	4(100%)	5(50%)	4(18%)
9	-	-	-	-	4(21%)
10	-	6(60%)	-	-	-
12	-	2(50%)	2(100%)	4(50%)	-

NOTE WELL: Number of Groups divided by two gives Number of Teachers. The percentage is percentage of A and B groups evaluated in terms of the total number of groups exposed to instructional sessions by teachers. See Table III for further details.

Table VIII

Pre to Post Test Mortality Rates by Cycle, Community, and Grade

<u>GRADE</u>	<u>Cycle</u>				<u>RVCR(3a)</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	
7	13%	3%	4%	15%	11%
8	-	12%	21%	11%	13%
9	-	-	-	-	10%
10	-	11%	-	-	-
12	-	24%	19%	21%	-
TOTAL	13%	12.5%	14.7%	15.7%	11.3%
GRAND TOTAL: 13.4%					

This finding, therefore, has two implications in terms of the overall evaluation design employed: (1) that sex can only be used very cautiously and speculatively as a design factor and the results interpreted with great care, and (2) that group as a design factor is unaffected by loss-rates and is still a sound factor design-wise in terms of conducting analyses.

A summary of the percentages of matched pre-to-post students purposefully sampled in terms of total number of students actually exposed to instructional sessions is given in Table IX. This table should be helpful in understanding the effects of sampling and mortality rates on the design factors to be discussed next and why certain factors are actually only mildly confounded in terms of estimating effects.

Table X presents the number of groups on whom data were collected by cycle and type of curriculum intervention and Table XI presents the data given in Table X in terms of number of students for whom matchable pre and post data were available. As can be seen from Tables X and XI, Type of Intervention is weakly correlated (confounded) with cycle. However, if the data given in Tables X and XI are examined in relationship to the exposure percentage given in Table IX, one will see that matchable pre and post test data were obtained on an approximately equal proportion of students who were exposed to each kind of intervention. Therefore, although students were not randomly assigned to type of intervention, data were collected on a proportionally equal number of students who were exposed to

Table IX

Percentages of Matched Pre-to-Post Students Purposefully Sampled
in terms of the Total Number of Students Actually Exposed to
Instructional Sessions

<u>GRADE</u>	<u>Cycle</u>				<u>KVCR(3a)</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	
7	29%	30%	21%	33%	16%
8	-	24%	47%	21%	16%
9	-	-	-	-	18%
10	-	31%	-	-	-
12	-	23%	84%	23%	-
TOTAL	29%	27%	50.6%	25.6%	17%

Somerville Total: 29.8%

GRAND TOTAL: 23.0%

each kind of intervention, thus making the results and estimates obtained representative of outcomes. In terms of bias and confoundings, however, it should be noted that the A group -- B group (extremes sampling) design employed, acts to reduce, if not eliminate, the effects of the various non-random assignments that are present in the data.

Table XII presents the number of groups for whom matchable pre and post data were collected by grade and Type of Curriculum Intervention. As can be seen from Table XII, the Improper Implementation of the CASPAR Curriculum category has an empty A group cell at the seventh grade level and an empty B group cell at the eighth grade level. This was due to one IICC teacher violating the curriculum implementation requirements in terms of the grade-level design factor. This violation leaves the overall design doubly confounded on grade, and it is due to this double confounding that both grade and IICC are eliminated from a number of analyses.

Table X

Number of Groups on Whom Data were collected by Cycle and Type of Intervention

	<u>Cycle</u>					
<u>TI</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>3a</u>	<u>TOTALS</u>
PICC	4	12	2	4	0	22
IICC	0	2	6	4	0	12
RVCR	0	0	0	0	12	12

TI = Type of Intervention

PICC = Proper Implementation of CASPAR Curriculum

IICC = Improper Implementation of CASPAR Curriculum

RVCR = Rival Curriculum

NOTE WELL: Number of groups divided by two gives number of teachers with the exception of RVCR

Table XI

Number of Students for Whom Matchable Pre and Post Data were Collected by Cycle and Type of Intervention

	<u>Cycle</u>					
<u>TI</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>3a</u>	<u>TOTAL</u>
PICC	81	248	48	74	0	451
IICC	0	45	124	75	0	244
RVCR	0	0	0	0	255	255

Table XII

Number of Groups for whom Matchable Pre and Post Data were Collected by Grade

<u>Type of Intervention</u>			
<u>GRADE</u>	<u>PICC</u>	<u>IICC</u>	<u>RVCR</u>
7	6	1	4
8	6	3	4
9	0	0	4
10	4	2	0
12	2	4	0

NOTE WELL: Groups divided by two gives number of teachers

Table XIII

Number of Groups by Type of Intervention and Test Forms for the Knowledge and Attitudes Measure

<u>Form</u>				
<u>TI</u>	<u>I</u>	<u>II</u>	<u>IIIa</u>	<u>IIIb</u>
PICC	10	4	2	4
IICC	0	2	6	4
RVCR	0	0	0	12

TI = Type of Intervention

PICC = Proper Implementation of the CASPAR Curriculum

IICC = Improper Implementation of the CASPAR Curriculum

RVCR = Rival Curriculum

NOTE WELL: Groups divided by two give number of teacher

Table XIII presents type of curriculum intervention by test form for the knowledge and attitudes measure. As can be seen from Table XIII, type of intervention and test form are confounded across the entire design. Data will be presented below, however, to show that this confounding does not present a problem empirically and that the conceptual problems with the forms can be eliminated by employing a domain-reference point of view of measurement. The confoundings displayed in Table XIII, it should be noted, are also present for several of the other measures employed (namely, the prior exposure, student process ratings, and teacher process log measures), but again these problems are empirically relatively minor ones as compared with the non-random assignment of teachers and students to type of intervention factor discussed in the previous paragraph. It is this non-random assignment to type of intervention factor that needs to be kept in mind, moreover, in terms of interpreting the results of any analyses, as this factor is the evaluation design's major, most important, and inescapable weakness.

Table XIV presents the flow of the micro-evaluation cycles conducted over time and Table V presents a summary of the instruments employed in conducting each of the major micro-evaluations by form (see Table I for the exact instrument schedule for each of the major micro-evaluation cycles). Tables XIV and IX should help the reader follow the descriptions of instruments and forms given below:

1. The Knowledge and Attitude Measure: Operationally, the epistemological construction of knowledge and attitudes employed by the program was one of belief. Knowledge, in this view, is well-grounded or accurate belief. The definite opposite of knowledge, therefore, is myth or myth belief. Attitudes, according to this view, are opinions, and opinions categorically are either well-grounded or stereotyped. A stereotyped opinion is by definition "a belief that is simple, inadequately grounded, partially inaccurate, and held with considerable assurance by many people (Hardy et. al., 1969. p. 7)".

Given the epistemological view outlined above, all knowledge and attitude items presented to students could be key-scored according to the following criteria:

(a) if the item was a knowledge item multiple and non-contradictory empirical evidence could be cited to support one or the two definite alternatives present. The item, therefore, could be scored correct or incorrect by this criterion;

(b) If the item was an attitude item, weak empirical, clinical, and logical evidence could be marshalled to support one of the two definite alternatives available as being more positive and well-grounded in terms of the program's philosophy. The item, therefore, could be scored positive or negative by this criterion.¹

¹A third class of items called perceptual items was also developed but these items were dropped from analyses. An example of a perceptual item is, "I know a lot of people who drink too much." The item cannot be logically keyed in any direction but the item could, with appropriate analyses, detect an important class of outcomes resulting from intervention.

Table XIV
Time Flow of Micro-Evaluation Cycles

<u>CYCLE</u>	<u>Month</u>						
	D	J	F	M	A	M	J
<u>(mc1)</u>	┌──────────┐						
sc1	┌──────────────────┐						
<u>(mc2)</u>		┌──────────┐					
sc2			┌──────────┐				
<u>(mc3)</u>					┌──────────┐		
sc3					┌──────────┐		
<u>(mc3a)</u>						┌──────────┐	
<u>(mc4)</u>					┌──────────┐		
sc4						┌──────────┐	
sc4a							┌──────────┐

mc = Major Micro-Evaluation Cycle

sc = Sub Micro-Evaluation Cycle

sc1 = Development of CDRGP Technique

sc2 = Development of SD Measure

sc3 = First Reliability Study Knowledge and Attitude Instrument

sc4 = SD Reliability Study

sc4a = Second Reliability Study Knowledge and Attitude Instrument

Table XV
Summary of Instruments by Forms

<u>Instrument</u>	<u>Collection Schedule</u>	<u>Forms</u>
Knowledge and Attitude Items	Pre and Post	I, II, IIIa, IIIb
Alcohol Use and Abuse Items	Pre and Post	I, IIa, IIb, III
Prior Exposure	Pre	I, Ia, II
Social Desirability	Pre	Ia, Ib
Student Process Ratings	Over Sessions	Ia, Ib, IIa, IIb, IIc
<u>Teacher Process Log:</u>	Over Sessions	
- Session Descriptions		Ia, Ib, II
- Process Ratings		Ia, Ib, IIa, IIb
- Critical Features		Ia, Ib

The above criteria, it should be noted, also served as the first screening standard for all of the knowledge and attitude items employed, and as the standards for classifying existing or new knowledge and attitude test items. (See Appendix 1 -- Pre and Post Test).

All knowledge and attitude items presented to students in each micro-evaluation cycle conducted employed the same "agree, disagree, and don't know or not sure, (?)" response topology. This topology created three possible response rates for each student in terms of both knowledge and attitude scores.

These response rates were:

<u>Knowledge Items</u>	<u>Attitude Items</u>
% correct	% positive
% uncertain (or not sure)	% uncertain (or ambivalent)
% incorrect	% negative

In terms of the above response rates, the percent correct and percent positive categories represent knowledge and well-grounded opinion, whereas the percent incorrect and percent negative categories represent myth belief and stereotyped opinions. The percent uncertain category for knowledge items represents declaration of ignorance or uncertainty (neither knowledge nor myth belief), whereas the percent uncertain category for attitude items represents ambivalence or the holding of a different view. Combining the incorrect and negative categories yields an estimate of a student's overall tendency toward mythical or stereotyped views, whereas combining the two uncertain categories yields an estimate of a student's tendency to have no view, a view in formation, or a view that is different from the view represented by the other response categories. More will be said on these points in the section on indexing in this chapter.

Between 19 and 21 knowledge and attitude items were presented to students in random order on a pre and post basis in each of the five micro-evaluation cycles conducted. As previously mentioned, the items and the number of items presented to students in each cycle were not the same due to the item revisions and improvements that were made across the five cycles. In general, students responded to at least eight (See Table XVI) well-worded, criterion-valid, and moderately difficult items in each cycle when poor items were eliminated as they were, for the purposes of scoring. As Table XVI shows, the number of students who took each form, and the number of items that survived for each form, are roughly equivalent, given the sample size.

Table XVII presents the one-to-one identical item correspondences between the four knowledge and attitude forms in the five micro-evaluation cycles conducted. As can be seen from Table XVII, the knowledge forms range from 40% one-to-one equivalency to 90% one-to-one equivalency, whereas the attitude forms range from 20% one-to-one equivalency to 90% one-to-one equivalency. Both the mean and median one-to-one equivalencies between the forms are approximately 50%. For the reader who has reservations about the domain-referenced point of view adopted in the present evaluation (see Chapter III), it should be noted that no significant pretest differences were found between the four forms employed when relevant background and design variables were used as control factors. From a domain-referenced point of view, therefore, the four forms may be said to be roughly equivalent as estimators of attainment levels and effects.

Two test-retest reliability studies were conducted on Form IIb of the knowledge and attitude items described above. The worst-case estimate of the test-retest reliability of the knowledge items across a two-week interval was .61, whereas the best-case estimate was .85. For the attitude items, the worst-case estimate of their test-retest reliability was .77, whereas the best-case estimate was .89. The full details of these two studies will be reported in depth in Chapter V as they are quite important and need to be understood fully in terms of drawing conclusions about the meaning of these estimates.

Table XVI

Number of Groups, Students, and Knowledge and Attitude Items by Forms across the Five Major Micro-evaluation Cycles in Somerville.

<u>Form</u>	<u>Groups</u>	<u>Students</u>	<u>Knowledge Items</u>	<u>Attitude Items</u>	<u>Total</u>
I	10	188	8	9	17
II	8	170	9	9	18
IIIa	8	126	10	10	20
IIIb	8	142	10	10	20

NOTE: Groups divided by two gives number of teachers by form. The two hundred and fifty-five rival curriculum students tested (24 groups) took form IIIb.

Table XVII

One-to-One Identical Item Correspondences Across Knowledge and Attitude Forms by Subtests.

<u>Form Companions</u>	<u>Knowledge Items</u>	<u>Attitude Items</u>	<u>Total</u>
I & II	4	6	10
I & IIIa	5	2	7
I & IVa	5	2	7
II & IIIa	5	4	9
II & IIIb	5	5	10
IIIa & IIIb	9	9	14

No clear factor structure was found for the knowledge items, or for the attitude items, or for both sets of items factored together. Total scores on the two sets of items, however, intercorrelated at $r = +.19$ ($N=971$) indicating a strong degree of statistical independence. Internal consistency estimates on the knowledge items (Chronbach Alpha's) ranged from .01 on the pretest to .69 on the post-test, whereas the internal consistency for the attitude items ranged from .26 on the pretest to .77 on the post-test. The full details of these findings will be presented in Chapter V (Psychometric Findings) as they need to be more fully explained; namely, from a cognitive theory view of performance.

2. The Alcohol Use and Abuse Measure: One goal of the CASPAR Alcohol Education Curriculum was to improve students' decision-making skills in terms of alcohol use and abuse. Measurement of this goal was operationalized methodologically through the Alcohol Use and Abuse Scale. Initially, this measure consisted of six open-ended situation-identification and definition items administered to students on a pre and post basis (Form I). These items proved to be extremely difficult to score, however, and to be quite problematic conceptually. A multiple-choice version of Form I, therefore, was developed and piloted in micro-evaluation cycle 2 (see Table XVIII). This response topology also proved to be problematic and two further revisions were made. Neither of the last two forms, unfortunately, proved to be acceptably successful, so this variable was excluded from statistical analyses and used as subjective support information in data interpretation.

Table XVIII

Number of Questions and Response Topologies by Form of the Alcohol Use and Abuse Measure

<u>FORM</u>	I Open ended	II Multiple Choice	III Multiple Choice	IV Open ended
Identification Items	1	1	1	1
Definition Items	5	4	4	3

3. The Social Desirability Measure: As previously stated, it was initially suspected that student responses to the knowledge and attitude items presented might be influenced by a desire to give socially acceptable answers rather than answers based on true personal beliefs and feelings.

In 1975, Crandall developed a 48-item social desirability scale for school-aged students which employed a true-false response topology. The Crandall Scale was found to have reasonably adequate test-retest internal consistency and predictive validity coefficients ($r = +.88$, $+ .82$ and $+ .75$ respectively). In December of 1976, all 48 items of the Crandall Scale were administered to 256 sixth and eighth grade students in a large suburban school system in eastern Massachusetts. This sample of students was found not to be significantly different from Crandall's norming population. From the responses provided by these 256 students to the Crandall Scale, 12 items were selected which best predicted students' 48-item scale scores under the restriction that these 12 items also have high internal consistency. The 12 items selected predicted 48-item scale scores at $r = +.87$ and they had an internal consistency coefficient of $r = +.86$. This procedure was then repeated with a second set of items that partially overlapped the first, and the same kind of predictive and internal consistency results were obtained ($r = +.83$ and $+ .81$). These two sets of items, therefore, were called Short Form A and B of the Crandall Scale, and the reason they were developed was to diminish the amount of testing time needed in the data collection process.

Data were collected on students prior to intervention occurring using the short-form A of the social desirability (SD) measure developed in micro-evaluation cycles 3, 3a, and 4 ($N=532$). On a post intervention basis (15 weeks), students in micro-evaluation cycle 1 ($N=81$) were administered the A and/or B form of the SD measure in a counter-balanced equivalent-form reliability study of the SD measure. Based on the results of this substudy, all cycle 1 students who had a score on the A form of the SD measure were assigned their first A form score, and the remaining 26 students were assigned their first B form score (although the two forms intercorrelated highly ($r = +.89$), the B form consistently tended to give a somewhat lower estimate of a student's SD level than the A form, particularly for males). No SD data were collected, it should be noted, on cycle 2 students ($N=277$). Last, it should be noted that a high score on the SD measure (according to Crandall) means a high tendency to give socially desirable responses, whereas a low score means a low tendency to give socially desirable responses. What these high and low tendencies operationally seem to mean in terms of the dependent variables investigated and response topologies employed will be given in Chapter V.

4. The Kind and Amount of Prior Exposure Measure: Operationally, five overlapping problems were encountered in terms of developing a usable kind and amount of prior exposure measure. These problems were:

(1) All CASPAR-trained teachers had been conducting alcohol education lessons in the Somerville schools as part of their Basic and Methods workshops for a period of two years prior to the implementation of the CASPAR curriculum. Many trained teachers, moreover, were conducting "fugitive" lessons over and above their training requirements, and none of these required or fugitive lessons had been tracked, nor was such tracking methodologically possible at the time.

(2) CASPAR peer leaders were impacting students in a wide variety of untracked and untrackable ways, but their primary mode of in-depth impacting seemed to be study halls in schools and CASPAR Club groups outside of school.

(3) The indirect evidence available seemed to indicate that all potential sources of CASPAR-related exposure were highly confounded and non-linear historically across grades. There also seemed to be, moreover, some type of complex within-grade exposure chain in operation (see Chapters I and V for details).

(4) Kind and amount of prior exposure, it is well-known, may hinder or facilitate the acquisition of new information and opinions when the content to-be-learned is novel or controversial in nature (see Bond, 1940; Ausubel and Fitzgerald, 1963; Ellis, 1965; Neisser, 1967; and Tobias, 1973). How sources of prior exposure other than CASPAR would actually affect the dependent variables being examined, however, was initially an undefined parameter, as this variable has never been scrutinized empirically for alcohol-related content to the best of the evaluators' knowledge. There was also the rival hypothesis that alternative sources of prior exposure might be more powerful mediators of effects than either the CASPAR curriculum or the CASPAR program; and,

(5) Self-report data from students were the only possible means of obtaining information about kind and amount of prior alcohol education. Memory, veracity, age, and understanding, therefore, would most certainly affect the data obtained. The data obtained, therefore, could only be construed as being at best probabilistic in nature -- and it would in the end have to be reduced to a few probabilistic prior exposure categories to contend with this fact.

Two types of prior exposure measures were developed and employed across the major micro-evaluation cycles conducted to contend with the multiple problems outlined above (see Table I). The information obtained from each of these forms, however, could be indirectly corroborated and linked through items in the student process ratings data that were obtained at the end of selected instructional sessions. In this way both cross-checking and probabilistic overlapping of the forms was made possible.

The first prior exposure form employed attempted to disaggregate the effects of all relevant sources of prior exposure through a series of 12 yes-no questions. Unfortunately, due to the order in which teachers chose to implement the CASPAR curriculum, this form could only be field-tested in micro-evaluation cycle 1 before decisions about the importance of amount had to be made. Analyses of the pre-test data (N=81) in cycle 1 revealed that home, CASPAR-related, and extraneous sources of prior exposure were confounded with "home alone" having a slight but not statistically significant advantage over home and CASPAR-related combinations. All exposed students, however, had significantly higher pretest means than unexposed students, demonstrating the importance of this variable, and unexposed students showed the greatest gains from instruction as one would expect if lack of prior cognitive structure was not having an inhibiting effect. Exposure classifications, moreover, were cross-validated through use of average-across-session process ratings, with unexposed students having higher

end-of-session process ratings on the "new to me" and "interesting" items than exposed students at the .001 level.¹ (See next section in this chapter for details)

Based on the results of cycle 1, the evaluators decided to focus exclusively on CASPAR-linked sources of prior exposure for the purposes of demonstrating prior program impact. The second (Form II) prior exposure measure employed, therefore, disaggregated prior exposure into peer leader-based and teacher-based sources, and asked students to state their degree of memorial confidence in terms of giving kind and amount estimates about each. A further feature of this form was that students had to write the name of the teacher or teachers from whom prior exposure had been received and the number of sessions that had been received from each teacher. This feature, therefore, kept open the possibility of detecting non-CASPAR-trained teachers who were teaching alcohol education in the Somerville schools.

Form II of the kind and amount of prior exposure measure was used in micro-evaluation cycles 2, 3, and 4 (N=545). Analyses of the data from these cycles revealed a good deal of variability among students in terms of their degree of confidence in making kind and amount of prior exposure estimates, particularly among seventh and tenth graders. Some students who initially reported having no exposure in the first questions asked later cited CASPAR teachers by name with estimates of number of sessions. Other students who reported having peer leader exposure later gave contradictory support information. A number of students who reported CASPAR teacher exposure (namely, actually wrote the name of a CASPAR-trained teacher) gave no estimates or number of sessions. Few students cited non-CASPAR-trained teachers as sources of prior exposure, and in the instances where such teachers were cited, a CASPAR-trained teacher also tended to be cited for an equal number or more sessions.²

How these problematic outcomes were dealt with in terms of arriving at kind and amount of prior exposure classifications is given in detail in the section on data indexing in this chapter. In all, however, these types of problems were observed in only .12% of the sample who took Form II of the kind and amount of prior exposure measure. Analysis of the data from Form II, moreover, not only corroborated the findings from cycle 1, but also showed a weak but significant linear relationship between number of sessions reported and entering knowledge levels.

¹Whether particular kinds of prior exposure have an inhibiting effect on instructional gains could not be answered from the data obtained and is still an unanswered question in terms of the learning of this mater

²As reported in Chapter I, Non-CASPAR Teacher citations occurred in less than 10% of the cases.

³Only 5% of the sample reported having in-depth peer leader contact. This in-depth contact, moreover, was highly confounded with CASPAR teacher contact. All analyses, therefore, were carried out using the teacher report items as the estimator of amount of CASPAR contact.

Kind and amount of exposure classifications were also cross-validated again using average-across-sessions process ratings on the "new to me" and "interesting" items, thus replicating for a second time the findings of cycle 1 (see Chapter 9 for results). At the gross or micro-data level, therefore, Form II can be said to be reasonably capturing the effects of prior CASPAR program impact.

Fitting the Form II kind and amount of prior exposure measure used in Somerville to the rival curriculum evaluated was not conceptually possible, since this curriculum was located in another community which had only loosely known internal articulations. It was decided, therefore, to use a variant of the Form I measure used in Somerville (Form Ia) to disaggregate the effects of home, school, and other sources of prior alcohol education in this suburban community in eastern Massachusetts so that elements of the design used in micro-evaluation cycle 1 in Somerville would be replicated.

Based on the data from this form, however, and a theory of what probably would have happened if a coherent school-based program had been in operation in this community in the past two years, the 12 rival curriculum groups on whom data were collected could be logically aggregated by grade and level of prior exposure within grade to overlap the Somerville data for the purposes of model testing, even though the grade-levels in the two communities were not in one-to-one correspondence. This overlapping of the data between the two communities, moreover, would provide a cross-validation test of the historical as opposed to logical (linear grades) model of the CASPAR Program.

Seventh, eighth, and ninth-grade rival curriculum students were presented with a series of 14 yes-no questions about sources of prior alcohol education that were almost identical to those presented to seventh grade students in Somerville in micro-evaluation cycle 1. Analysis of this data revealed that home and school sources of prior exposure were extremely confounded except for the eighth grade where friends were the most frequently reported single source of prior alcohol education. When it came to predicting entering levels on the dependent variables of interest, however, presence or absence of home exposure gave the best empirical fit, and statistically significant linear main effects were observed across both grade and level of home exposure classification (see Appendix 2 Technical Assistance Report Number 1 for details). Although not corroborated by process ratings, these results replicated those obtained in cycle 1 in Somerville in terms of both sources of prior exposure effects and the approximate equivalencies between sources as estimators. Pretest levels of unexposed seventh grade students in both communities, moreover, were not significantly different, nor were there statistically significant total myth belief score differences between unexposed eighth grade students in the two communities, where Form II of the kind and amount of prior exposure measure was used with Somerville eighth graders. Last, the linear grade-level trend in the rival curriculum data supports the validity of assuming a logical development-over-time model for the rival curriculum community.

The reader is referred to the section on data indexing in this chapter for specific details on the scoring, data reduction, and overlapping procedures used to develop the levels of prior exposure categories described and reported here. The reason for this postponement will become apparent with the description of the next measure.

5. Student Process Ratings: As previously stated, process measurement was considered to be important for two reasons. The first of these reasons was for the detection of possible throughput differences in terms of explaining outcomes (see Chapter II for details), and the second was for cross-validation of major design variables (namely, type of intervention received, level of prior exposure and group classification). Students, therefore, were asked to rate what were considered to be important process variables at the end of selected instructional sessions. Selection of which sessions students would rate was prescribed by an across cycles, sessions, and grades matrix sampling plan (see Tables XIX, XX, XXI and XXII for details).

The chief problem encountered with the student process rating data was finding a response topology that could be employed without difficulty by the broad range of students from whom data were collected. Four response topologies and kinds of items, therefore, were employed across the five major micro-evaluation cycles conducted (see Table XXIII for the set of items that remained constant across all of the forms employed).

In micro-evaluation cycle 1, seventh grade students were presented eight bipolar adjective pairs separated by a ten point scale for making ratings at the end of almost all instructional sessions (see Table XIX for responding schedules). These students found the ten point scale to be too difficult in terms of making responses (too many differentiations) and this complaint was supported by their empirically truncated usage of the scales.¹ Cycle II students, therefore, were presented with the same eight bipolar adjective pairs that cycle I students were for session ratings with a reduced seven point rating scale (see Table XIX for responding schedule). Cycle II students also had difficulty with the scale, so a sample of students were interviewed to find a remedy for the problem. These students reported having problems with simultaneously choosing a descriptor and then circling its proper degree. Form IIa, therefore, was developed from student suggestions. This form separated the two responding functions by first asking a student to circle a descriptor and then to circle its degree. Form IIa was utilized successfully in micro-evaluation cycle 3 and improved in micro-evaluation cycle 4. (Forms IIb and IIc). Only

¹This result is somewhat atypical as the evaluators have successfully used this type of response topologies in a number of communities with students younger than seventh graders.

one overall session rating point was collected in micro-evaluation cycle 4, it should be noted, due to resource availability and the fact that enough data had been collected in the first three cycles to make collection of more than one data point on cycle 4 students unnecessary in terms of using this variable as an estimator.¹ (For copies of all forms, see Appendix 1).

As with the knowledge and attitude items, a domain-referenced point of view was taken with the student process rating data. Scale relativities were removed by converting each item response for each session to a percentage of the range value possible for the scale form employed. All items for all sessions were then converted to the same directional polarity so that a high percentage meant a positive rating for the item in the session and low percentage meant a low rating for the item in the session. Average across-sessions percentage ratings for each item were then generated for each student using the number of sessions attended by the student as the averaging N. An average across-sessions, across-items total percentage was then generated for each student by averaging the across-sessions item averages. These across-sessions and across-items averages, therefore, provide the best estimate possible of each student's level of process ratings.

Students were presented with the same eight bipolar adjective pairs that cycle 1 students were for session ratings with a reduced seven point rating scale (see Table XIX for responding schedule). Cycle II students also had difficulty with the scale, so a sample of students were interviewed to find a remedy for the problem. These students reported having problems with simultaneously choosing a descriptor and then circling its proper degree. Form IIa, therefore, was developed from student suggestions. This form separated the two responding functions by first asking a student to circle a descriptor and then circle its degree. Form IIa was utilized successfully in micro-evaluation cycle 3 and improved through student interviews in micro-evaluation cycle 4 (Forms IIb and IIc). Only one overall session rating point was collected in micro-evaluation cycle 4, it should be noted, due to resource availability and the fact that enough data had been collected in the first three cycles to make collection of more than one data point on cycle 4 students unnecessary in terms of using this variable as an estimator.² (For copies of all forms, see Appendix 1).

¹Process rating data was collected from the rival curriculum groups using form IIa of the process rating measure but both resources availability and technical data collection problems made this data unusable (see Technical Assistance Report Number 1 for further details).

²Process rating data was collected from the rival curriculum groups using form IIa of the process rating measure but both resources availability and technical data collection problems made this data unusable (see Technical Assistance Report Number 1 for further details).

As with the knowledge and attitude items, a domain-referenced point of view was taken with the student process rating data. Scale relativities were removed by converting each item response for each session to a percentage of the range value possible for the scale form employed. All items for all sessions were then converted to the same directional polarity so that a high percentage meant a positive rating for the item in the session and a low percentage meant a low rating for the item in the session. Average across-sessions percentage ratings for each item were then generated for each student using the number of sessions attended by the student as the averaging N. An average across-sessions, across-items total percentage was then generated for each student by averaging the across-sessions item averages. These across-sessions and across-items averages, therefore, provide the best estimate possible of each student's level of process ratings.

Using across-sessions item averages, the internal consistency of the student process ratings was $r = +.85$. Sampling grades and sessions from each cycle ($N=12$), the internal consistency estimates by forms of the student process ratings ranged from $r = +.78$ to $r = +.93$. Using across-session item averages as the unit of analysis, a relatively clear two factor structure was found by both forms and common item sets. Due to resources and time this line of analysis was not pursued, but the factors found seemed to be (1) newness and (2) helpfulness of the content presented.

Table XIX

Matrix Sampling Plan for Student Process Ratings by Grade, Cycle and Session.

			Session										
<u>Grade 7</u>	<u>Cycles</u>		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>Total</u>
Teacher 1	I	A	x	x		x	x	x	x	x	x	x	9
		B	x	x	x	x	x	x	x	x	x	x	10
Teacher 2	I	A	x	x	x	x	x	x	x	x	x		9
		B	x	x	x	x	x		x	x			7
Teacher 3	II	A		x		x		x			x	x	5
		B		x		x		x			x	x	5
Teacher 4	III	A		x	x	x				x	x	x	6
		B		x	x	x				x	x	x	6
Teacher 5	IV	A										x	1
		B										x	1
Teacher 6	IV	A										x	1
		B										x	1
<u>Grade 8</u>													
Teacher 7	II	A		x	x		x			x	x		5
		B		x	x		x			x	x		5
Teacher 8	II	A		x	x		x			x	x		5
		B		x	x		x			x	x		5
Teacher 9	III	A		x	x	x				x	x	x	6
		B		x	x	x				x	x	x	6
Teacher 10	III	A		x	x	x				x	x	x	6
		B		x	x	x				x	x	x	6
Teacher 11	IV	A					x					x	2
		B					x					x	2
<u>Grade 10</u>													
Teacher 12	II	A			x	x			x		x		4
		B			x	x			x		x		4
Teacher 13	II	A			x	x					x	x	4
		B			x	x			x		x		4
Teacher 14	II	A		x	x	x	x						4
		B		x	x	x	x						4
<u>Grade 12</u>													
Teacher 15	II	A			x			x	x	x			4
		B			x			x	x	x			4
Teacher 16	III	A		x				x	x				3
		B	x	x	x			x	x	x			6
Teacher 17	IV	A										x	1
		B										x	1

Table XX

Percentage of Curriculum Implementation Groups sampled by Grade and Sessions in Terms of Student Process Ratings.

<u>Grade</u>	<u>Sessions</u>									
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
7	33	75	42	67	33	42	33	50	58	83
8	0	80	80	50	60	0	0	80	80	60
10	0	33	100	100	33	0	50	0	60	11
12	11	33	50	0	0	66	66	50	0	33
Total	11	64	68	54	32	25	29	45	50	47

NOTE: The number of sessions estimates available for each student is a function of that student's session attendance pattern as well as the student's form and responding schedule.

Table XXI

Percentage of Curriculum Implementation Cycles and Sessions in Terms of Student Process Ratings.

	<u>Sessions</u>									
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
Cycle 1	100	100	75	100	100	80	100	100	75	50
Cycle 2	0	57	71	86	57	28	36	43	71	21
Cycle 3	12	100	88	75	0	25	25	88	75	75
Cycle 4	0	0	0	0	0	0	0	0	0	100
Total	28	64	60	65	39	33	40	58	55	62

NOTE: The number of session estimates available for each student is a function of that student's attendance pattern as well as the student's form and responding schedule.

Table XXII

Number of Groups, Students, and Collection Occasions by Forms of Student Process Ratings.

	<u>Groups</u>	<u>Number of Items</u>	<u>Students</u>	<u>Collection</u>	<u>Occasions</u>
				Range	Average
Form Ia	4	8	81	9/10	9.5
Form Ib	12	8	277	4/5	4.5
Form IIa	8	8	127	3/6	5.5
Form IIb	8	8	150	1/2	1.5

NOTE WELL: The number of session estimates available for each student is a function of that student's session attendance pattern as well as the student's form and responding schedule.

Table XXIII

List of Common Student Process Rating Items Across Forms

-
-
1. easy - hard
 2. clear - confusing
 3. interesting - boring
 4. new to me - not new to me
 5. something I like talking about -
something I didn't like talking about
-

Using student process ratings for cross-validation purposes was somewhat of a complicated matter, it should be noted, as the ratings were in part confounded with Proper and Improper Implementation of the CASPAR Curriculum (see the section on data indexing in this chapter). In general, however, both group and prior exposure classifications were cross-validated through use of selected and total across-session item averages (linear means in the directions expected) and a decreasing linear trend was observed in average ratings by grade (see Chapter IX for details). Cell means regardless of all these factors, however, were all within one grand standard deviation unit of each other, and this fact is an important one in terms of using this data as corroborative information in making decisions about probabilistic category assignments; namely, one grand standard deviation either side of an average grand item mean can be used as the cutting score for deciding on probability of category membership (see the section on data indexing in this chapter for further details).

6. The Teacher Process Log: As previously stated, four major intervention variables needed to be measured to obtain a conceptually adequate evaluation. These variables were:

(1) Sessions Descriptions: a description of the exact nature of the version of the CASPAR curriculum that was actually taught to students by each teacher so that type of intervention judgments could be made according to the criteria outlined at the beginning of this chapter;

(2) Boundary Conditions: information about the actual conditions of teaching so that deviations from semi-ideal conditions could be detected and entered into the type of intervention judgments that were to be made according to the criteria outlined at the beginning of this chapter;

(3) Critical Incidents: information on the frequency and rate of critical incidents that were observed to occur in the classroom within the intervention time span (see Chapter II for details); and,

(4) Teacher Process Ratings: information about selected process variables provided by teachers that could be compared with the process rating information that was being provided by students (see last section in this chapter for details).

The four variables described above were methodologically operationalized in different parts of one instrument which was called the Teacher Process Log (see Appendix 1). All teachers who implemented the CASPAR curriculum completed a Process Log at the end of each instructional session taught or shortly thereafter for their A and B groups only. There was also an item in the log concerning time of completion and the log data were 95% complete across both teachers and sessions. It was not possible to implement the logging procedure for the Rival Curriculum intervention. Session descriptions and observer reports, therefore, were used to understand the de facto nature of this curriculum's implementation.

Table XXIV presents the response topology of the Sessions Description measure. As can be seen from Table XXIII, the response topology employed was structured but open-ended, thus allowing for detail through coded abbreviations. To both facilitate and standardize the reporting process, a manual was developed for this section and all other sections of the Teacher Process Log (TPL) giving directions, codes, and operational definitions. Teachers were trained in use of the Log and each of its sections through this manual prior to use (see Appendix 3 for details). Each teacher, moreover, had a personal copy of the manual available for use at log filling-out time. All teachers who implemented the curriculum also participated in group debriefing sessions which occurred a week or two after their micro-evaluation cycle was completed. Education Program staff supervised.

The response topology of the Sessions Description Measure remained relatively constant across all of the micro-evaluation cycles conducted with only a few minor variations. As previously mentioned, the data was 95% complete. The details on how these data were scored are given in the data indexing section of this chapter, although the scoring procedures are somewhat obvious given the criteria provided at the beginning of this chapter.

Table XXV presents the response topology employed for the Conditions of Teaching Measure. As can be seen from Table XXV, this measure was a series of 12 yes-no questions concerning non-content-related intervention violations. Since the Conditions of Teaching response topology given in Table XXV remained relatively constant across all of the micro-evaluation cycles conducted, both single session and total sessions' degree of violation estimates could be computed from the yes-no information the topology provided by the averaging procedures outlined in the last section of this chapter on the scoring of student process ratings. How these degree of violation averages were factored into the type of intervention judgments made is given in the data indexing section of this chapter.

Table XXVI presents the response topology for the Critical Features measure (see Chapter II for conceptual details). As can be seen from Table XXVI, the response topology of the Critical Features Measure is similar in many ways to the response topology employed for the Conditions of Teaching Measure. The scoring procedures for the Critical Features measure, however, are somewhat different from the Conditions of Teaching measure. Since description of the scoring procedures and resulting indices for the Critical Features data really need to be directly followed by the presentation of findings to make the results clear and easy to follow for the reader, further description and discussion of the Critical Features measure is postponed until Chapter VIII Critical Features Findings where all of the remaining information concerning the measure will be presented together.

Table XXIV

Session Description Response Topology Employed in the Teacher Process Log

- I. Lesson Description: Please describe the content covered, method used, time taken, and use of a peer leader (if applicable) for each part of the session you taught today.

	CONTENT COVERED	METHOD USED	TIME TAKEN	PL USED
1.	_____	_____	_____	_____

2.	_____	_____	_____	_____

3.	_____	_____	_____	_____

Table XXV

Teaching Conditions Response Topology Employed in the Teacher Process Log

III. EXCEPTIONS TO IDEAL CLASSROOM CONDITIONS: Check any of the following occurrences that were exceptions to ideal classroom conditions from the evaluation point of view in terms of today's session:

- | | |
|--|--|
| ☐ students' <u>mood</u> worse than usual | ☐ <u>presence</u> of observers or visitors |
| ☐ your <u>mood</u> worse than usual | ☐ <u>presence</u> of video-taping/filming |
| ☐ <u>materials</u> needed to conduct class not available | ☐ many <u>interruptions</u> or a significant interruption |
| ☐ <u>more time</u> needed to cover this session's content | ☐ students <u>absent</u> for a good part of session |
| ☐ <u>less time</u> needed to cover this session's content | ☐ <u>external</u> happenings distracting students |
| | ☐ more than 5 minutes used for <u>Non-AE</u> activities. |

Other: (explain): _____

Table XXVI

Critical Features Response Topology Employed in the Teacher
Process Log

V. CRITICAL FEATURES: For each critical feature observed, fill in
student code name(s).

1. Active student becomes observably passive _____
2. Passive student becomes observably active _____
3. Student makes revealing comments in class _____
4. Student seeks help and is referred _____
5. Student hangs around after class or
school asking questions _____
6. Student becomes very emotional: cries,
gets angry, etc. _____
7. Student mentions talking to his/her
family about the course _____
8. Student privately talks about own drink-
ing problem _____
9. Student privately talks about drinking
problem of someone close _____
10. Other (explain):

The Teacher Process Ratings measure included in the Teacher Process Log was essentially an expanded and more sophisticated version of the Student Process Rating measure described earlier. The Teacher Process Ratings measure passed through four forms over the micro-evaluation cycles conducted (see Table I). Forms Ia and Ib of the measure were identical except for one item and were comprised of three subparts. These subparts were:

- (1) ratings of students on their activities, readiness, and goal attainment;
- (2) ratings on the teaching session in general; and,
- (3) self-ratings of teaching performance.

Due to teacher complaints about Process Log length, the Process Rating measure was reduced in micro-evaluation cycles 3 and 4 to 12 questions concerning the nature of student-teacher interaction. These 12 questions asked teachers to estimate the frequency of occurrence of certain classroom events such as probing, question-askings, disagreements, and withholding of responses. The 12 questions went through two forms (Form IIa and IIb) and had, based on teacher report, the ultimate effect of cueing teachers on the occurrences of these behaviors, which was one of the intentions behind the development and use of the scale. That teachers reported this cueing happening and felt that they could ultimately reliably report on the occurrence of a few specific behaviors indirectly provides some non-reactive validity evidence for the data from the Critical Features Scale.¹

The data from Forms IIa and IIb of the Teacher Process Ratings measure were scored by reducing the frequency estimates to a seven point scale. This reduction made the Form II data compatible with subpart 2 of Forms Ia and Ib. The data from all forms were then averaged for sessions and across-sessions by the procedures outlined in the last section of this chapter on the scoring of the student process ratings.

7. The Teacher Knowledge and Attitudes Measure: Although not chronologically part of the micro-evaluation cycles outlined in this chapter, data were collected on all teachers and other school personnel trained by CASPAR on a pre, post, and delayed post basis, the delayed post being in June of 1977, one month after implementation of the curriculum had occurred (see Chapter I for details). Since the item-types and response topologies were the same, the teacher knowledge and attitude measures were capable of being scored by the procedures employed for the student knowledge and attitude measure, thus giving index similarity. However, as the items of the teacher measure were somewhat different from the student measure, they were capable of being partitioned into the following subscales:

Two teachers who team-taught reported doing independent frequency counts in alternative sessions where one teacher would teach and the other observe. These two teachers reported that their estimates were not widely discrepant from each other.

- (1) knowledge;
- (2) attitudes towards teenagers and drinking;
- (3) general attitude toward alcohol; and
- (4) total overall attitude toward alcohol and alcohol use.

Each of the above subscales, moreover, could be expressed in terms of all three of the response rates described earlier in this chapter in the student knowledge and attitude section.

A test-retest reliability study was done of the teacher knowledge and attitude measure in a southeastern Massachusetts small community in March of 1976 (N=14). The test-retest reliabilities for the subscales ranged from $r = +.56$ to $r = +.81$, with the variance being attributable mostly to fluctuations in "not sure" response scores. Incorrect response scores were most stable regardless of the subscale. The Chronbach Alpha's for the teacher measure (N=78) ranged from zero on the pretest to $r = +.68$ on the post-test to $r = +.84$ on the delayed post. These results are quite similar to those found for the student measure and will be explained more fully in Chapter 5. Again, as with the student measure, no reasonably clear factor structure was found, although subscale scores were fairly statistically independent. The average correlation between the subscales over time points was $r = +.24$, the subscales becoming more correlated with each time point.

Analyses of the pre to post data on the teacher training measure showed that all trainees significantly gained on all subscales as a result of Basic Workshop training ($p < .001$). The effects were primarily due to a reduction in "not sure" responses on most subscales, although there were significant reductions in incorrect responses also at the .001 level (see Chapter X for details). The teachers who implemented the CASPAR curriculum, moreover, were statistically the most successful trainees of all. No significant statistical post Basic Workshop training differences could be found between proper and improper implementers of the CASPAR curriculum. These factors, therefore, may be methodologically ruled out in terms of interpreting the results of the curriculum implementation.

The Flow of the Micro-Evaluation Cycles

As previously stated, the purpose of this section is to outline those evaluation anomalies that have not already been identified and to describe the Rival Curriculum intervention. Unless stated otherwise, each micro-evaluation cycle described was conducted according to the A group-B group design outlined previously using the evaluation instruments specified in Table I at the beginning of this chapter.

Micro-evaluation cycle 1: The anomalies in this cycle were that one teacher post-tested his groups two weeks later than the other teacher and that the other teacher had videotaping done in her class by a local television station that might have promoted some reactivity.

Other anomalies of this cycle were that students were interviewed about the CDRGP technique and that the AD scores for students in this cycle were collected 15 weeks after treatment in an A/B equivalent form reliability study. One major strength of this cycle was that Student Process Ratings were collected after almost every instructional session thus allowing some data to be generated on session attendance patterns and the relationship between number of sessions received and outcomes.

In general a moderately strong linear relationship was found between number of sessions received and knowledge gain ($r = +.34$). The relationship between number of sessions received and attitude outcomes, however, was not linear. More than six sessions had to be received it seemed, to make a marked difference. This finding is important in terms of interpreting results as the Rival Curriculum group on the average received four instructional sessions as compared to Somerville students who received on the average eight instructional sessions using the data from this cycle as the estimator. Both teachers in this cycle were science teachers.

Micro-evaluation cycle 2: The anomalies in this cycle were that no SD data were collected on students and some students were interviewed about the student Process Ratings response topology. Another anomaly was that three teachers pre and post tested during the first and last sessions rather than one day before and one or two days after instruction as requested. One teacher in this cycle taught only five sessions, a teacher who was classified as an improper implementer of the CASPAR Curriculum. All seven teachers in this cycle were science teachers.

Micro-evaluation cycle 3: The anomalies of this cycle were primarily violations of ideal curriculum implementation criteria. These violations will be described more fully in the data indexing section. Other anomalies were that a few teachers did not pre or post test according to schedule. Two teachers pre and post tested during the first and last session, while another teacher post-tested two weeks late. In this cycle two science teachers tried out the curriculum and two reading teachers team taught the curriculum. Only one teacher was a valid implementer.

Micro-evaluation cycle 4: The major anomalies of this cycle were that the first reliability study was embedded in one teacher's implementing the curriculum with her unexposed groups and that one proper implementer of the curriculum at the seventh grade level taught only five instructional sessions. Other anomalies concerned implementation patterns with one teacher violating the A group-B group design and another teaching students who had already been exposed to the CASPAR curriculum. The latter teacher was dropped for the purposes of pre to post-test analyses. Two other teachers team-taught one group of students who were almost all female and this group was also dropped from analyses. In this cycle, two science teachers and three non-science teachers tried out the CASPAR curriculum. Tables XXVII and XXVIII give summaries of the type of teacher who tried out in Somervilleby cycle and type of curriculum implementation. As can be seen from these two tables, science teachers tended to be the ones who properly implemented the CASPAR curriculum.

Micro-Evaluation Cycle 3a, The Rival Curriculum: The Rival Curriculum evaluated by CASPAR and used for comparison purposes was an Alcohol Education Week conducted at a junior high school in a northeastern Massachusetts suburban community in April of 1977. This week-long program included an orientation session, films, guest speakers, rap sessions, lectures, and handout information. (See Appendix 1). Students attended the multiple activities available during the course of the week in lieu of their science and health education classes. Activities were also available to be experienced by students during their lunch period if they chose to attend. Given all of the multiple options and rotating schedules, it was not possible to accurately ascertain how much of or how homogeneous an intervention was actually experienced by each student on whom pre and post test data were obtained. The best estimates possible on these two factors are that students on the average received about four exposures (not counting the effects of the informal exposure chain) and that seventh and ninth grade students received relatively homogeneous interventions whereas eighth graders might not have.

Although the instruments used to evaluate the rival form of intervention described above were specifically tied to the objectives of the CASPAR curriculum, the Health Education Director in the rival community judged them to be suitable for use (i.e., content valid) in terms of evaluating his school's Alcohol Education Week. This community, moreover, also had the potential for external alcohol education agencies delivering instruction and intervention to students, thus a further degree of between-communities comparability was obtained on the external agency factor.

The basic design methodology used in evaluating the rival curriculum was the same as that used for CASPAR in Somerville with the exception of a "doubling-up" factor. The Head of the Science Department was asked to identify two A and two B groups at the seventh, eighth and ninth grade-levels for the purposes of evaluation. By this procedure within group (A and B) differences could be tested for both within and between grade levels.

The major anomalies that occurred in the evaluation of the rival curriculum were as follows:

(1) The seventh and eighth grades in the rival community were not officially "streamed". The science department head, therefore, was only relatively sure of his group designations. Analysis of the pre test data for these grades, moreover, raised questions about the science department head's designations. After consultation with teachers, the science department head relabelled the groups and his relabellings agreed with the empirical pretest results;

(2) Due to miscommunication, a substitute teacher administered the pre and post test to one group (9B2) on the pretest day rather than the pretest and the SD measure. This group, therefore, was administered the SD measure with the post-test;

Table XXVII

Type of Curriculum Testing Teacher by Cycles

	<u>Cycles</u>			
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
Science	2	7	2	2
Non-Science	0	0	2	4

Table XXVIII

Type of Curriculum Testing Teacher by
Type of Intervention in Somerville

	<u>PICC</u>	<u>IICC</u>
Science	9	3
Non-Science	0	4

PICC = Proper Implementation of CASPAR Curriculum

IICC = Improper Implementation of CASPAR Curriculum

NOTE WELL: N's do not correspond to Table XX N's due
to team-teaching and teachers who were
dropped from analyses.

(3) Two groups of students (7B1 and 9B1) were administered the post-test two weeks later than other students. Post-test means in these two groups were lower than their yoked counterparts, indicating that the delay had some kind of effect, although the differences were within the standard error of the mean given the reliability of the test.

Overall, analyses of the rival community's pretest data revealed equivalencies between the two A and B groups on whom data were collected at each level and that the data from this community fit a logical across-time developmental model.

Data Indexing

As previously stated, several variables had to be indexed for the purpose of conducting analyses. The procedures used to index these variables are described below:

1. The Knowledge and Attitudes Measure: As previously outlined, the knowledge and attitudes measure had three response rates: correct, not sure, and incorrect. The "not sure" response rate is somewhat logically orthogonal to the other two and poses analytical problems for which there are no good solutions presently available. Analyses of this measure, therefore, were carried out in terms of each response rate and then a total rate that was generated by the following procedure:

(a) Each correct response was given a score of two and each not sure response was given a score of one. Incorrect responses were given a score of zero;

(b) total response rates were then divided by the number of items upon which the totals were based.

The above scoring procedure produces a scaled score that ranges from 0 to 100. This scaled score, moreover, is a weighted percentage (all "not sures" being 50%). Due to the weighting, therefore, changes from or to the "not sure" category will only produce small scale scored changes, whereas changes from or to the correct and incorrect categories will produce relatively larger changes. Thus, the overall and relative magnitudes of change are expressed in this scaled score. This kind of scaling, moreover, can be done for knowledge items and attitude items separately or for all of the items together. Last, it should be pointed out that if a group's "not sure" response rate decreased and its net scaled-score change was zero, this would signify a contradiction outcome (equal movement from correct to incorrect responses as from incorrect to correct). However, if a group's "not sure" response rate increased and its net scaled-score change was zero, this would signify an increase in ambiguity overall. More will be said on this point in Chapter VII.

2. The Social Desirability Measure: Although comprised of 12 items, the social desirability scale is really a classificatory measure. The median score of each community, therefore, was used to assign each student to a high or low classification on this measure for the purpose of conducting analyses. The reason the median score for each community was used rather than the overall median scores was that the Somerville students had higher overall SD scores than the Rival Curriculum community. Since the evaluators' interpretation of this variable is a measure of a tendency not to guess when a "not sure" option is available, use of each community's median score provides inter-community comparability on this measure.

3. The Prior Exposure Measure: As previously stated, the prior exposure measure produced several responding problems. These problems were dealt with in the following manner:

(a) Students who said they had no prior exposure but then wrote the name of a CASPAR teacher were given teacher exposure status and the number of sessions reported after checking the student's average "new to me - not new to me" session ratings to corroborate the decision.¹ For these students the methodology was seen as being a type of clarification process.

(b) Students who wrote the name of a CASPAR teacher but gave no number of sessions were given teacher exposure status and one lesson of exposure after checking the student's average "new to me - not new to me" response ratings to corroborate the decision.

(c) Students who reported having exposure but who wrote no teacher's name were given low or no exposure status if the decision could be corroborated by the student's average "new to me - not new to me" session ratings.² Otherwise, the student was given a score of one for number of sessions;

(d) Students who wrote the names of CASPAR and Non-CASPAR teachers were given CASPAR teacher exposure status and the number of sessions reported, if the number of lessons reported was greater for the CASPAR teacher than the non-CASPAR teacher. Otherwise, the student was given non-CASPAR exposure status and the total number of sessions reported. There were six instances of the latter outcome in the entire sample; and,

¹ The criterion of one-standard deviation below the overall grand mean of this item was used in the decision making. See the section in this chapter on student process ratings for further details.

² The criterion of one standard deviation above the overall grand mean for this item was used as the cutting score in decision-making. See the section in this chapter on student process ratings for further details.

(e) Students who gave logically contradictory information in terms of peer leader exposures were given a score of zero on the depth of peer leader exposure scale.

Overall, only 12% of the sample had to be "straightened" by the techniques described above with the majority of cases being of the (a), (b), and (e) kind.

Once the prior exposure data was "straightened" the peer leader sources of prior exposure were scored in the following way:

- (a) a report of being in a study-hall group was given a score of 1 (otherwise zero);
- (b) a report of being in a CASPAR Club was given a score of 1 (otherwise zero);
- (c) all other sources of exposure were given a value of zero as they were essentially "one-shot" affairs, and,
- (d) the student's vector of ones and zeroes was then summed to produce a total score of 0, 1, or 2.

The above index was called the student's Peer Leader Depth Score (PLDS) as it reflected the amount of in-depth contact the student had with one or more peer leaders.

A number of sessions score of four was used to assign students to low or high prior CASPAR teacher exposure categories. The cutting score of four was used to make high and low prior teacher exposure (PTE) assignments for the following reasons.

(a) empirically, a score of four cut the Somerville data cleanly across grade-levels. The majority of the students in the low PTE category tended to have number of session scores of 0, 1, or 2, while the majority of the students in the high PTE category tended to have number of session scores of 5, 6, or 7;

(b) logically, one could not expect any given student to have experienced any more than 1 or 2 tryout sessions by CASPAR teachers who received training in the Basic Workshop. (see Chapter 1 for details). Allowing for exaggeration and memory, a cutting score of four logically separated students who experienced "one-shot" CASPAR tryout lessons from those who received more systematic exposure (Methods training tryouts and fugitive lessons); and,

(c) A cutting score of four lessons allowed a better fit to be achieved between Form II of the PTE measure and Form Ia and Ib. In terms of Forms Ia and Ib, "high exposure" students tended in almost all instances to report three or four sources of prior exposure (the most constant of which were school and home), whereas "low exposure" students tended to report zero or one exposures which were never school or home. A cutting score of four, therefore, allowed these two measures to be probabilistically overlaid by using the home-school categories of Form Ia and Ib for high-low PTE assignments. In Somerville, this overlay involved 81 seventh grade cases, whereas

in the rival curriculum community it involved all 255 cases. The reader is referred back to the section on the prior exposure measure in this chapter for further details on these points.

Using the above procedures, a categorical variable called Level of Primary Prior Exposure (LPPE) was created on which all students had either a high or a low classification score. The variable was called LPPE due to the fact that CASPAR teachers were both functionally and empirically the primary mediators of prior exposure and most frequently the initial agents of exposure in the exposure chain (see Chapter I for details). Other CASPAR-related sources of exposure and effects, therefore, were more "secondary" or "indirect". These secondary sources of CASPAR exposure, however, will get subsumed through indexing in Chapter VI, when it is shown that the historical rather than logical model of the CASPAR program is the more valid representation of the program. The LPPE variable will then be subdivided into four categories (minimal, low, moderate and high) by combining it additively with reaggregated grades, as reaggregated grades best reflect categorically both the amount of secondary exposure and chaining effects. The LPPE variable will then be renamed CLPPE (Combined Levels of Prior Program Exposure), and reaggregated grades will be called PPAG (Prior Program Activity Grades). The CLPPE variable, moreover, will give the clearest and most parsimonious representation of the CASPAR program and its effects.

4. Type of Intervention: As previously stated, these were six criteria and three data sources available for classifying or characterizing the type of intervention each CASPAR teacher implemented. The criteria for a Proper Implementation of the CASPAR curriculum (PICC) were:

- (1) that the teacher teach at least five curriculum sessions to two groups of students at the same grade level;
- (2) that the teacher include sessions on facts, attitudes, alcoholism, and decision-making, including the recommended emphasis (# of sessions) for each section.
- (3) that the teacher use small group discussions and/or a role-playing technique in his or her teaching;
- (4) that the teacher not use unapproved films, speakers, materials, or teaching methods;
- (5) that the teacher not teach the sessions on alcoholism before the sessions on drinking and decision making; and,
- (6) that the conditions of teaching during the teacher's implementation of the curriculum be reasonably adequate.

The data sources available from teachers for making type of intervention classifications were:

- (1) individual session descriptions that were filled out by each teacher at the end of each session (95% complete);
- (2) Teacher Ratings on the Conditions of Teaching Scale that were filled out at the end of each session (see the section of the Teacher Process Log in this chapter for further details); and,
- (3) Information from the post-teaching debriefing sessions conducted by the Program staff with each teacher.

Using the criteria and data sources given above, process logs of each CASPAR teacher were analyzed to arrive at a type of intervention classification for the teacher. Those CASPAR-trained teachers who were classified as Improper Implementers of the CASPAR Curriculum (IICC) as a result of these analyses are described below:

Teacher 1: Teacher 1 violated the sequencing criterion (criterion 5) in a number of ways. This teacher additionally devoted five of the ten sessions taught in both groups to alcohol facts. In one group this teacher taught only one session on attitudes and decision making and none in the second group. The latter group received only the unit on alcoholism. The teacher also violated the evaluation design requirements by teaching one group at one grade level and the second group at another grade level. This teacher underwent training only in the Basic Workshop. In the pre and post test administered to all teachers who took the Basic Workshop, in response to a question on the most appropriate approach to teaching about alcohol, alcoholism and decision making s/he rated the knowledge transmission model as the most appropriate.

Teacher 2: Teacher 2 taught only four sessions when pre and post testing time was excluded. Two of the four sessions were devoted to attitudes and decision making and the other two to alcoholism. The across sessions conditions of teaching index for this teacher's A group was 40% on a zero to 100 scale, indicating a low degree of reasonably adequate teaching conditions for this group. This teacher was trained in both the Basic and Methods workshops.

Teacher 3: This teacher severely violated the sequencing criterion and scattered the teaching sessions over 39 days. This teacher also focused almost exclusively on the alcoholism section and took students on field trips to half-way houses. This teacher was trained in both the Basic and Methods workshops.

Teacher 4: This teacher essentially conducted his/her own, rather than the CASPAR curriculum devising sessions which were mixed in with those of the CASPAR curriculum. The teacher also gave a self-made test half-way through the unit in addition to the CASPAR test. S/he also had speakers who were not cleared with CASPAR staff. This teacher took training in both Basic and Methods workshops.

Teacher 5 and 6: These two teachers team taught the CASPAR curriculum in an open laboratory situation. Their across-sessions conditions of teaching index was 20% on the zero to one hundred Conditions of Teaching scale. These two teachers were also plagued by high absenteeism rates during the attitudes and decision making

sessions of the unit (70%). They additionally had some seventh and ninth grade students mixed in with their eighth graders. These two teachers participated in both the Basic and Methods workshops.

Teacher 7: This teacher also taught in an open laboratory situation. This teacher's across-sessions condition of teaching index was 35% on the Conditions of Teaching Scale. This teacher was not only plagued by high absenteeism during the knowledge and attitudes sessions of the unit (55%) but also had a small subsection of out of grade students. This teacher also participated in both the Basic and Methods workshops.

From the above descriptions it should be evident that no IICC classification was a "close call". It also should be evident no particular violation was the most common, nor could violation be predicted from associated teacher data. Violations were correlated and multiple across the cases and they occurred for all types of teachers.

Conclusions

If one takes a domain-referenced sampling view of the estimation of effects, one should be able to see from the tables and materials presented in this chapter that the macro-evaluation design employed sampled across:

- 1) Forms of instrumentation;
- 2) type of response topologies;
- 3) teacher sex and student sex;
- 4) units of instruction and amount of prior exposure;
- 5) students, groups, grade-levels, and communities;
- 6) time of year and time of day at which exposure occurred;
- 7) teacher-type and teaching conditions; and,
- 8) type of curriculum exposure.

Any estimate or effect, therefore, is a product of all of these factors. However, any effect observed is also an estimation of that effect across all of these factors given the material and results that have been presented in this chapter. It will be seen, moreover, that the major weakness of non-random assignment of students and teachers to type of intervention actually favors the Improper Implementation of the CASPAR Curriculum exposure condition. Pretest levels on all dependent variables were higher for IICC students than for the other type of intervention conditions (see Chapter VI for details).

Given that these higher pretest levels are not introducing a ceiling effect or a non-linear metric to the scales (which they do not appear to be doing), the design conditions are actually stacked against the Proper Implementation of the CASPAR Curriculum exposure condition, thus fortuitously providing a more rigorous test.

CHAPTER V

PSYCHOMETRIC FINDINGS

Due to the time constraints affecting this report, the data presented in this chapter are not as fully analyzed or tabularized as the evaluators would like them to be. Some readers may prefer to read Chapter VI (findings on prior program impact) and Chapter VII (pre to post curriculum implementation results) before reading this chapter on psychometric findings. Other more methodologically oriented readers, however, might like to be familiar with the results presented in this chapter as the findings reported are quite important in terms of data interpretation. To accommodate both kinds of readers, therefore, a summary of the pertinent findings will be presented first and then the detailed statistical tables. In this way, the reader may make his or her own choice at the end of the summary as to what to read next. The evaluators consider this chapter to be important in terms of findings due to the fact that little psychometric analysis seems to have been done on instruments in this area.

Summary

A summary of the pertinent psychometric findings reported in this chapter is presented below:

1. Data on the distributions of correct, uncertain, and incorrect response rates for the knowledges and attitude items (N=881) revealed that students in general could not be psychometrically characterized as myth believers or holders of stereotyped opinions. Only 6.2% of the sample in the two communities in which the data were collected had myth belief (incorrect knowledge) response rates above 60%. The median myth belief response rate for the knowledge items, moreover, was 30.1%.¹ Only 0.7% of the sample had stereotype opinion (negative attitude) response rates above 50%, and the median stereotyped opinion response rate for the attitude items was 25.0%. When the data were analyzed using amount of prior exposure as the blocking variable (see Chapter VI), the response rates of students with minimal prior exposure were found to be essentially random; namely, equally distributed at the chance level across the three types of response rates. This random response profile of minimally exposed students, moreover, was found to be roughly the same at all grade levels. In terms of cognitive schemas, therefore, minimally exposed students in both communities would have to be characterized as being essentially "plastic" or in the process of formation; namely, undifferentiated in either the positive or negative direction on the scales. Students with prior

¹ Students in general, therefore, believed in some or a few myths, ignoring for the moment the fact that the median response rate is at the chance level for the response topology employed.

exposure, however, would have to be said to be positively differentiated in general, the amount of differentiation being a linear function of the amount of prior exposure. That students, as a generalization, believe in myths may be a myth in this area and that students, as a generalization, hold stereotyped opinions may be a stereotyped opinion in this area. Further research on these points is definitely needed, but the characterization of students just outlined is an accurate one for the data examined in the present evaluation.¹

2. The Social Desirability variable was found to best predict a tendency to respond "don't know" or "undecided" rather than incorrect (myth or stereotyped response) as originally suspected. The tendency to give socially desirable responses, therefore, was an intervening variable but the intervening variable was not a tendency to give mythical or stereotyped responses. Rather, the intervening variable was one of a tendency to comply with test directions; namely to respond "don't know" or "undecided" if this were indeed the case rather than attempting to guess the "right" answer. The data that best supports this interpretation of the SD variable comes from two sources:

¹ Everyone regardless of level of development believes in some myths and holds a few stereotyped opinions about any given phenomenon on content area. It is the nature of being human in a changing world. The central psychometric and scientific question, however, is one of characterization. Just as one must ask what someone's response level on a test must be to say that the person psychometrically knows something or has knowledge, one must also ask what the person's incorrect response rate on a test must be to say that the person is a myth believer or holder of stereotyped opinions. The questions are psychometrically and scientifically the same, as are the procedures for answering them. Based on the data presented in this chapter, 6.2% of the sample was one standard deviation above the chance incorrect mean response rate for the knowledge items. The sample as a whole, therefore, can be characterized as believing in a few myths but they cannot be psychometrically characterized as myth believers. The same is also true for stereotyped opinions. These results may be due to the populations in these two communities, or to some kind of population shift since the original data was generated on these items by investigators in this area. The evaluators, however, believe that this is not the case as similar results have been found by Lynch and Stanswell (1976) on sex role stereotypes and Warren (1977) on belief in career myths. One, therefore, may challenge the items or the population but one cannot challenge the findings or the type of analysis that would have to be carried out on a different set of items or with a different population.

(a) Amount of prior exposure was linearly related to uncertain response rates. Students with minimal prior exposure had the highest uncertain response rates. However, students with high SD scores had significantly higher uncertain response rates on the pretest than students with low SD scores in every prior exposure category. The relationship between SD levels and uncertain response rates, therefore, was linear in terms of amount of prior exposure.

(b) All students uncertain response rates decreased from pre to post indicating that with exposure all students attempted to answer more items. The uncertain response rates of high SD students decreased more significantly than those of low SD students.

Given the above results, the best interpretation of the SD variable in the present case would seem to be one of test-taking set; namely, of a tendency to comply with directions and mark uncertain or guess in an attempt to "get a good score." More conventional context-of-testing interpretations could also be made of the SD variable which would make the outcomes more congruent with the views of social desirability theorists. The evaluators believe, however, that the interpretation given is the best one for the data at hand.

3. All knowledge and attitude internal consistency coefficients (Cronbach alphas) went from approximately zero on the pretest to about .70 on the post test. This same phenomenon was also observed in the pre, post, and delayed post data collected on teachers. The pre-intervention alpha coefficients of zero were caused by consistent negative inter-item correlation coefficients among the knowledge and attitude items. Although the latter finding helped the evaluators to uncover a technical problem with the alpha coefficient (see Carifio, 1978), the results may be interpreted in the following way:

(a) Pretest coefficients of zero with consistent negative inter-item correlation coefficients are indicative of "systematic error" not incorrect item keying. One source of systematic error is the SD variable; namely, those students with high SD systematically marking uncertain responses, with low SD students guessing. Another source of systematic error is one or two knowledge or attitude items that are consistently gotten wrong by the "high scores" with other Ss marking the uncertain response. These outcomes occurred in three instances and is evidence of an incomplete cognitive schema or erroneous inferences by the student (or teacher) from the schema held. The erroneous inferences and their cause warrant further investigation.

(b) The random response pattern of unexposed Ss indicates a lack of a clearly differentiated or coherent cognitive schema. Such a lack would produce a pre-intervention alpha of zero and is therefore supported by the data.

(c) Contradictory response patterns or cognitive schemas would also produce alphas of zero. This type of hypothesis has been made by a number of clinicians working in the area and there was some support for its partial validity in the data; and,

(d) Any responder to the scales who held a view, belief, or opinion that was different from the two extreme options available for responding would be forced to employ the uncertain response option to express this "not either" difference. Such responders would reduce the internal consistency coefficients for the scales due to their cognitive schemas being different from what was capable of being expressed by the responding options available. The scales, therefore, are not capable of capturing alternative cognitive schemas and consequently scores must be interpreted with some care and in context (namely, pre, post, delayed post and so on). One must use the web of data available in making interpretations.

The internal consistency results are quite supportive of the usefulness of adopting a cognitive structure learning theory approach in terms of understanding awareness education. Such an approach, moreover, is helpful in clarifying and explaining the lack of conventional psychometric properties of many measurement scales in this area. The lack of conventional psychometric properties, therefore, does not necessarily mean that the scales being employed are not "valid," but rather that different kinds of psychometric criteria might need to be applied in making the final judgment.

4. In terms of the test-retest reliability studies done of the CASPAR Alcohol Education Knowledge and Attitude Instrument, it would seem that the following conclusions are pertinent although the full details of these two studies should be examined by the reader:

(a) There does seem to be a test effect on the knowledge subscale; namely, simply testing is a treatment, or stimulus to seek "treatment," particularly for younger students. For most students, however, the testing effect is not a systematic effect; namely, scores do not systematically increase or decrease between administrations. This fact would imply that the external information gained is sometimes correct and sometimes incorrect in a random way. Although this outcome means that scores on the instrument employed are to some degree unstable, it does not mean that they are biased from administration to administration; namely, increase or decrease just due to taking the instrument more than once;

(b) For certain students, taking the instrument more than once does seem to systematically increase scores. This increase seems to be due to the depth to which the students report thinking about the content of the instrument and perhaps to the answers the student is given to inquiries. For such a student the test is a stimulus to gain instruction even when no formal instruction is available;

(c) Students questioning other students about the content of the instrument seems to spread within grades (classrooms at the same grade-level) but not between grades. This result is very similar to "corridor" research studies (Wicks and Beggs, 1968) and supportive of the within-grade and between-grades permeation effects hypotheses presented in Chapter I; and,

(d) The test-retest reliability coefficients of the CASPAR Alcohol Education Knowledge and Attitude Instrument seem to increase with age (more information is needed on this point) and to increase when valid experimental conditions are obtained (no external sources of information flow). Overall, the reliability coefficients are adequate for effects estimation, but particularly so for students at the seventh grade level or above, given that the scales are only ten items each in length. When spurious information sources are eliminated, the instrument gives subscale scores that are quite stable ($r = +.85$ and $r = +.89$). Since these spurious sources of information will most likely be operational in most situations, close findings of significance ($p = .10$ to $.05$) should most probably be accepted with extreme caution as they may not be due to intervention but rather to non-intervention factors. However, since extra intervention sources seem to produce random increases or decreases of scores, use of the CASPAR instrument and interpretations of its findings should not be fraught with difficulties at the .01 level.

The test-retest studies conducted show quite clearly that the slightest amount of structured or purposeful stimulation begins the learning process in this area. These two studies also show, however, that what is learned from external or extraneous sources is not necessarily correct.

Score Distributions

Tables I, II and III present the distributions of percent correct, uncertain and incorrect scores for all students on the pretest for both knowledge and attitude items. Table IV presents the total mean response rates for all students by grade level (knowledges and attitudes combined) and Table V presents the mean response rates of all students on the knowledge and attitude items separately. Table VI presents the outlier response percentages for Somerville students only by grade-level, the outlier response criteria being chance level performance.

As can be seen from Table VI, only a small percentage of students were observed to score above the chance level on incorrect response rates at any grade level. The above chance incorrect response rates on the knowledge items were significantly higher for seventh and tenth grade students in Somerville but this outcome is due to these two grades receiving the least amount of prior program exposure. The reader should also note in Table VI that the below chance-level correct response rate percentages are extraordinarily low at all grade levels indicating that extremely few students could be said to have "negative knowledges" (in the psychometric sense of the term), even if one "counts in" the percentages under the neutral response rate category. The results presented in Tables I to VI, therefore, essentially support the following points:

Table I
Distributions of Percent Correct Scores,
All Students Pre-Intervention (N=881)

<u>Score Interval</u>	<u>Knowledge Items</u>		<u>Attitude Items</u>		<u>All Items</u>	
	<u>Percent</u>	<u>Cum Percent</u>	<u>Percent</u>	<u>Cum Percent</u>	<u>Percent</u>	<u>Cum Percent</u>
0-10%	0.7	0.7	0.0	0.0	0.1	0.1
11-20%	2.2	2.8	0.1	0.1	0.2	0.3
21-30%	8.4	11.2	0.9	1.0	1.4	1.7
31-40%	12.9	24.2	3.3	4.3	6.5	8.2
41-50%	14.4	38.6	7.7	12.0	15.9	24.1
51-60%	19.1	57.7	15.7	27.7	22.4	46.4
61-70%	20.9	78.5	19.9	47.1	23.2	69.6
71-80%	10.3	88.9	21.0	68.1	19.6	89.2
81-90%	6.9	95.8	17.1	85.2	9.5	98.8
91-100%	4.2	100.0	14.8	100.0	1.2	100.0
MEAN	51.9		68.2		60.4	
MODE	50.0		70.0		60.0	
Median	50.2		69.7		60.3	
St. Dev	20.2		17.6		15.0	

Table II

Distribution of Percent Uncertain Scores,
All Students, Pre-Intervention (N=881)

<u>Score Internal</u>	<u>Knowledge Items</u>		<u>Attitude Items</u>		<u>All Items</u>	
	<u>Percent</u>	<u>Cum Percent</u>	<u>Percent</u>	<u>Cum Percent</u>	<u>Percent</u>	<u>Cum Percent</u>
0-10%	32.6	32.6	55.1	55.1	44.0	44.0
11-20%	22.4	54.9	22.5	77.5	27.7	71.7
21-30%	19.0	73.9	12.9	90.5	16.1	87.9
31-40%	12.8	86.7	5.1	95.6	7.4	95.2
41-50%	6.4	93.1	3.0	98.5	3.7	99.0
51-60%	4.3	97.4	1.0	99.5	0.8	99.8
61-70%	1.7	99.1	0.3	99.9	0.1	99.9
71-80%	0.6	99.7	0.1	100.0	0.1	100.0
81-90%	0.2	99.9	0.0	100.0	0.0	100.0
91-100%	0.1	100.0	0.0	100.0	0.0	100.0
MEAN	16.9		8.8		12.7	
MODE	0.0		0.0		0.0	
Median	11.7		4.1		10.2	
St. Dev	16.7		12.4		12.5	

Table III

Distributions of Percent Wrong Scores,
All Students, Pre-Intervention (N=881)

Score Internal	Knowledge Items		Attitude Items		All Items	
	Percent	Cum Percent	Percent	Cum Percent	Percent	Cum Percent
0-10%	4.8	4.8	11.8	11.8	3.6	3.6
11-20%	12.9	17.7	25.5	37.3	22.8	26.4
21-30%	23.5	41.2	24.4	61.7	32.0	58.5
31-40%	27.0	68.2	19.1	80.8	23.4	81.8
41-50%	15.2	83.4	11.7	92.5	12.9	94.8
51-60%	10.3	93.8	4.9	97.4	4.5	99.3
61-70%	4.9	98.6	2.2	99.5	0.6	99.9
71-80%	1.0	99.7	0.5	100.0	0.1	100.0
81-90%	0.2	99.9	0.0	100.0	0.0	100.0
91-100%	0.1	100.0	0.0	100.0	0.0	100.0
MEAN	31.2		22.7		26.8	
MODE	30.0		10.0		25.0	
Median	30.1		20.4		25.1	
St. Dev	16.2		15.4		12.1	

Table IV

Total Sample Mean Response Levels
by Response Categories on the Pretest (N=881)

	<u>Correct</u>	<u>Neutral</u>	<u>Wrong</u>
7th Knowledge	50.1	16.7	33.0
Attitude	61.3	11.8	26.4
8th Knowledge	60.1	12.8	27.0
Attitude	70.7	7.6	21.2
9th Knowledge	56.2	16.3	25.3
Attitude	78.7	4.6	17.5
10th Knowledge	46.7	14.5	38.8
Attitude	68.6	8.0	22.4
12th Knowledge	64.5	12.2	23.2
Attitude	76.6	6.8	16.2

Table V

Mean Response Rates, All Students, Pre-Intervention (N=881)

	<u>Percent Correct</u>	<u>Percent Neutral</u>	<u>Percent Wrong</u>
Knowledge Items	51.9	16.9	31.2
Attitude Items	68.2	8.8	22.7
All Items	60.4	12.7	26.8

Table VI

Somerville Outlier Response Percentages
by Grade on the Pretest (N=746)

	<u>Correct Responses</u>	<u>Neutral Responses</u>	<u>Wrong Responses</u>
7th Knowledge	only 4% < 20%	only 2% > 50%	only 11% > 50%
Attitude	only 2% < 20%	only 1% > 50%	only 3% > 50%
8th Knowledge	0% < 20%	only 3% > 50%	only 2% > 50%
Attitude	0% < 20%	0% > 50%	only 3% > 50%
10th Knowledge	only 7% < 20%	only 1% > 50%	only 11% > 50%
Attitude	only 3% < 20%	only 1% > 50%	only 2% > 50%
12th Knowledge	only 1% < 20%	only 2% > 50%	only 3% > 50%
Attitude	0% < 20%	only 1% > 50%	only 2% > 50%

NOTE WELL: 20% is approximately one standard deviation below chance level.

50% is approximately one standard deviation above chance level.

(a) Students in general in this sample cannot be psychometrically characterized as myth believers or holders of stereotyped opinion. In fact, very few students in the sample could be characterized in this way;

(b) Knowing a student's, group's or kind of group's correct response rate level does not necessarily mean (and in most cases does not mean) that the incorrect response rate level is a reciprocal value. Uncertain response rate levels must be taken into account as a low percent correct score could mean a high percent uncertain score and not a high percent incorrect score. Making such erroneous assumptions will lead one to misconstrue the data as can be easily seen from Tables IV or V; and,

(c) A significant percentage of students have essentially a random response profile. This point will be seen more clearly in Chapter VI where the response rate profiles are presented by levels of prior exposure.

From the data presented in Tables I to VI, one is hard pressed empirically to characterize the students in these two communities as being myth believers or holders of stereotyped opinions. Such a characterization cannot be supported in terms of the students in this sample.

Social Desirability

Tables VII, VIII, and IX present the correct, uncertain and incorrect response rate percentages for RVCR intervention condition students on the pretest by Grade, Sex, and Level of Social Desirability (N = 255). The reasons that the results for the RVCR students are being presented are as follows:

(1) They are the clearest in terms of demonstrating the points to be made;

(2) SD is known to be a developmental variable that changes inversely with age and the RVCR data is on students in three consecutive grades;

(3) SD levels are known to change (decrease) faster for males than for females. Data from consecutive grades, therefore, is even more important due to this factor; and,

(4) RVCR students had significantly lower SD levels than Somerville students thus giving a more stringent test case for the hypotheses.

Table VII

Percent Correct Knowledge Scores on the Pretest for the RVCR Curriculum Group by Grade, Sex, and Level of Social Desirability (N=255)

<u>Grade</u>	<u>Males</u>				<u>Females</u>			
	<u>Low SD</u>		<u>High SD</u>		<u>Low SD</u>		<u>High SD</u>	
	n	$\bar{x}$	n	$\bar{x}$	n	$\bar{x}$	n	$\bar{x}$
7	16	31.3	17	35.3	15	48.0	32	37.5
8	16	55.6	17	46.7	25	50.0	32	47.8
9	22	56.4	19	43.2	22	61.8	19	50.9
TOTAL								

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>P</u>
Grade(G)	2	5049.8	14.7	<.001*
Sex(S)	1	1293.7	3.8	<.05
SD	1	2923.9	8.5	<.004
G x S	2	731.5	2.1	<.12
G x SD	2	415.1	1.2	>.05
S x SD	1	46.3	0.2	>.05
G x S x SD	2	639.3	1.9	<.16
Error	243	342.4		

Table VIII

Percent Uncertain Knowledge Scores on the Pretest for the RVCR Curriculum Group by Grade, Sex, and Level of Social Desirability (N=255)

<u>Grade</u>	<u>Males</u>				<u>Females</u>			
	<u>Low SD</u>		<u>High SD</u>		<u>Low SD</u>		<u>High SD</u>	
	n	$\bar{x}$	n	$\bar{x}$	n	$\bar{x}$	n	$\bar{x}$
7	16	33.8	17	31.2	15	30.0	32	28.7
8	16	9.4	17	24.1	25	23.6	32	26.6
9	22	13.2	19	25.6	22	9.5	19	17.7

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Grade(G)	2	4330.3	13.2	<.001
Sex(S)	1	2.5	0.0	>.05
SD	1	2000.8	6.1	<.01
G x S	2	1129.5	3.4	<.05
G x SD	2	897.8	2.7	<.07
S x SD	1	368.6	1.1	>.05
G x S x SD	2	215.4	0.6	>.05
Error	243	328.9		

Table IX

Percent Incorrect Knowledge Scores on the Pretest for the RVCR Curriculum Group by Grade, Sex, and Level of Social Desirability (N=255)

<u>Grade</u>	<u>Males</u>				<u>Females</u>			
	<u>Low SD</u>		<u>High SD</u>		<u>Low SD</u>		<u>High SD</u>	
	n	$\bar{x}$	n	$\bar{x}$	n	$\bar{x}$	n	$\bar{x}$
7	16	35.0	17	33.6	15	22.0	32	33.8
8	16	35.0	17	29.4	25	26.4	32	25.6
9	22	30.5	19	31.0	22	28.6	19	31.4

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Grade(G)	2	79.0	0.4	>.05
Sex(S)	1	1184.2	5.5	<.02
SD	1	87.3	0.4	>.05
G x S	2	204.4	0.9	>.05
G x SD	2	348.8	1.6	>.05
S x SD	1	676.6	3.2	<.08
G x S x SD	2	167.2	0.8	>.05
Error	243	215.7		

Table X

Percent Uncertain (Undecided) Attitude Scores on the Pretest for the RVCR Curriculum Group by Grade, Sex, and Level of Social Desirability

<u>Grade</u>	<u>Males</u>				<u>Females</u>			
	<u>Low SD</u>		<u>High SD</u>		<u>Low SD</u>		<u>High SD</u>	
	n	$\bar{x}$	n	$\bar{x}$	n	$\bar{x}$	n	$\bar{x}$
7	16	9.4	17	10.0	15	5.3	32	10.0
8	16	1.9	17	11.1	25	6.8	32	12.5
9	22	4.5	19	12.6	22	2.7	19	3.2

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Grade(G)	2	188.5	1.3	>.05
Sex(S)	1	136.6	0.9	>.05
SD		1383.8	9.7	<.002
G x S	2	386.9	2.7	<.07
G x SD	2	121.9	0.8	>.05
S x SD	1	86.1	0.6	>.05
G x S x SD	2	175.5	1.22	>.05
Error	243	143.4		

Table X presents the uncertain (undecided) response rate percentages for the attitude items on the pretest for the RVCR students so that the reader may see that the results observed in Table VIII were consistent across both the knowledge and attitude scales. A summary of the findings presented in Tables VII to X is given below:

(1) As can be seen from Table VII, there appears to be grade level, sex and SD differences in terms of percent correct scores on the knowledge items of the pretest. However, an examination of Table IX (incorrect response rates) will reveal that the grade level and SD differences disappear. Students across the three grades and two levels of SD are not significantly different from each other in terms of the percentage of knowledge items they answered incorrectly on the pretest. How then does one account for the percent correct score differences observed by grade-level and SD in Table VII?

An examination of Table VIII will reveal that the differences observed in percent correct knowledge scores in Table VII come from a differential usage of the uncertain response category by high and low SD students across the grade levels. Low SD students use the uncertain response category less over the grades-levels than high SD students (recall that males are known to change faster on SD than females and thus the lag rates observed in the Tables). In fact, high SD students remain relatively constant in their level of usage of the uncertain response rate category across the grade level which is a contradiction in terms of expectation. Given the data presented in Table VII to X and the fact that all students in both communities at all grade levels answer fewer items uncertain on the post test than on the pre test, it would seem that the most conservative interpretation of the findings would be that high SD students tend to comply with the test directions whereas low SD students may have guessed a few extra correct answers. What the SD scale seems to be measuring, therefore, is a tendency toward a certain kind of test-taking behavior and thus perhaps not genuine true-score differences between SD student types (see Table IX). One would probably want to investigate the sex differences found in Tables VII to X a little further before coming to any final conclusion. However, it would seem from the evidence available that using the SD variable in analyses would be akin to applying a correction-for-guessing formula to the data.

(2) If the reader examines the response rate percentages of seventh graders across Tables VII, VIII, and IX, it will be seen that they constitute close to a random response pattern regardless of level of SD, but particularly so for high SD students. This point supports those made in the last section of score distributions; and,

(3) Table IX should clearly show the reader how the true nature of response profiles may be misrepresented by analyzing percent correct scores only.

Given the data presented in this section it would seem warranted to conclude that the evaluators' interpretation of the SD variable is supported.

Test-Retest Reliability Results

The first test-retest reliability study conducted on the CASPAR Alcohol Education Knowledge and Attitude Scale utilized an eighth grade curriculum implementation teacher's uninstructed student groups in micro-evaluation cycle 4 (see Chapter IV for details). One of the three groups in this study was accidentally exposed to some instruction of the "One Drink Equivalency" session by coming into the classroom earlier than expected and then asking that the class be devoted to the BAC Wheel. The other two unexposed groups, however, also began asking the teacher alcohol questions during the testing interval, and students who were not in any of the teacher's classes also began to make inquiries. It was during that course of this study, therefore, that the workings of the exposure chain described in Chapter I began to become empirically clear to the evaluators. The retest data were collected 23 days after the initial testing and then analyzed by groups in an attempt to begin to understand the nature of the contaminating effects. Table XI presents the results of these analyses.

As can be seen from Table XI, the knowledge items were most unstable and open to the influence of exposure. However, the attitude items do not appear to be that much better, particularly when the stability of the undecided (uncertain) response category is taken into account. Based upon what was learned in this first test-retest reliability study, a second study was designed and carried out in June of 1977.

The second reliability study of the CASPAR Alcohol Education Knowledge and Attitude Instrument was conducted with sixth and seventh grade parochial school students (N = 91) in Somerville so as to avoid the possibility of extraneous school-based instructional influences. The design employed in this study was as follows:

(1) Two classrooms of sixth grade students (N = 45) and two classrooms of seventh grade students (N = 46) were administered the knowledge and attitude instrument by CASPAR program staff with the regular classroom teacher present in the classroom. The school had randomly assigned students to classrooms at the beginning of the school year. Analysis of the first test administration reveals no significance between class-in-grade differences supporting the school's report of random assignments at the beginning of the school year;

(2) Seven days after the administration of the first test, all sixth and seventh grade students were administered the knowledge and attitude test again and then administered a short follow-up series of structured response questions about whether or not they had spoken to anyone and to whom during the seven day interval.

Table XI

Test-Retest Coefficients from the First Reliability Study (N=60)

	<u>Groups</u>			
	<u>Accidentally Exposed(N=26)</u>	<u>Group 2 (N=17)</u>	<u>Group 3 (N=17)</u>	<u>Total (N=60)</u>
Percent Correct Responses Knowledge Items	.46	.75	.66	.57
Percent Positive Responses Attitude Items	.51	.71	.74	.63
Percent Uncertain Responses Knowledge Items	.50	.75	.68	.59
Percent Uncertain Response Attitude Items	.53	.50	.63	.54

(3) All students then answered a longer questionnaire on possible contamination sources and one sixth and one seventh grade classroom was then group interviewed on the same items to cross-validate the meaning of the results obtained.

Given the design outlined above, a number of possible contamination sources were partitionable. Only the most important of these sources will be reported on at this time.

Table XII presents the test-retest reliability coefficients on percent correct scores by grade. As can be seen from Table XII, sixth graders were far more variable on the knowledge items than seventh graders with no differences occurring on the attitude items in terms of stability levels. The reader should note that the r_{tt} coefficient on the knowledge items for sixth graders is similar to the r_{tt} coefficient found for the accidentally exposed group in the first reliability study, suggesting that some kind of contamination occurs even in a highly isolated situation.

The group interviews held with students revealed that students within a given grade level talked with each other about the content of the test but that students tended not to talk to each other between the two grade levels. Student-talk within a given grade level, moreover, was not confined to other students in a given classroom only but rather it occurred between students in each of the two classrooms at each grade level, thus empirically demonstrating the existence of the exposure chain (see Chapter I). Other analyses of the follow-up questionnaire, moreover, revealed the following points:

(1) Those students who reported talking to friends, parents, or teachers about the knowledge items on the test had greater test to retest variation (absolute difference) scores than those students who did not report talking at the .001 level of significance (see Table XIII).¹ Sixth graders reported more question asking than seventh graders, and the variation in sixth grade absolute difference scores was greater than seventh grade scores at the .01 level. Females reported asking more questions than males and had significantly greater absolute difference scores than males at the .01 level of significance.

(2) Those students who reported that they spent time during the week interval actively thinking about the questions on the test had significant increases in knowledge scores from the test to the retest (see Table XIV). Only about 50% of these students reported talking to other people about the items on the test. This finding seems to be related to Craig and Lockhart's depth of processing view of learning and behavior change.

¹Significant differences were not observed when simple difference scores were used in analyses.

Table XII

Test-Retest Reliability Coefficient by Grade (N=91)

<u>Grade</u>	<u>n</u>	<u>r_{tt} Facts</u>	<u>r_{tt} Attitudes</u>
6th	45	.55	.74
7th	46	.70	.74
Average	91	.61	.74

(3) When the test-retest reliability coefficients were recalculated using what might be termed as only valid Ss (no reported talking to others or thinking about the items), the reliability coefficients significantly increased. These coefficients are given in Table XV.

Table XIII

Absolute Test-Retest Mean Difference Scores for Knowledge Items by Grade, Sex, and Reported Sources of Talking (N=91)

<u>Grade</u>	<u>Males</u>				<u>Females</u>			
	<u>No Talking</u>		<u>Talking</u>		<u>No Talking</u>		<u>Talking</u>	
	<u>n</u>	<u>$\bar{x}$</u>	<u>n</u>	<u>$\bar{x}$</u>	<u>n</u>	<u>$\bar{x}$</u>	<u>n</u>	<u>$\bar{x}$</u>
6th	9	5.2	12	14.3	9	7.9	16	16.3
7th	11	3.4	5	9.7	13	6.5	18	11.6

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Grade(G)	1	362.1	8.4	<.01
Sex(S)	1	374.6	7.3	<.01
Talk(T)	1	534.1	12.6	<.001
G x S	1	56.0	1.3	>.05
G x T	1	81.9	1.9	>.05
S x T	1	94.8	2.2	>.05
G x S x T	1	73.3	91.7	>.05
Error	84	43.1		

Table XIV

Test-Retest Mean Difference Scores for Knowledge Items by Grade, Sex, and Report of Thinking about the Test Items

<u>Grade</u>	<u>Males</u>				<u>Females</u>			
	<u>Thought</u>		<u>No Thinking</u>		<u>Thought</u>		<u>No Thinking</u>	
	n	$\bar{x}$	n	$\bar{x}$	n	$\bar{x}$	n	$\bar{x}$
6th	5	8.0	16	1.9	8	6.3	16	2.5
7th	5	10.0	11	-3.6	10	7.8	21	1.4

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Grade(G)	1	25.5	0.1	>.05
Sex(S)	1	4.8	0.0	>.05
Thought(T)	1	995.7	4.2	<.05*
G x S	1	0.0	0.0	>.05
G x T	1	45.1	0.2	>.05
S x T	1	53.3	0.2	>.05
G x S x T	1	25.9	0.1	>.05
Error	84	236.3		

Table XV

Test-Retest Reliability Coefficients for Non-Stimulated Subjects

<u>Grade</u>	<u>n</u>	<u>r_{tt} Fact</u>	<u>r_{tt} Attitude</u>
6th	18	.81	.87
7th	<u>29</u>	<u>.87</u>	<u>.90</u>
Average	47	.85	.89

Given the data that has been presented in this section, the conclusion stated at the beginning of this chapter would seem to be warranted; namely, that testing is a stimulus to seeking information but the overall effect of the stimulation does not systematically increase or decrease scores for most students. Scores on the CASPAR Alcohol Education Knowledge and Attitude Instrument are somewhat unstable, but they are not systematically biased one way or another from administration to administration for most students in general.

CHAPTER VI

PRETEST KNOWLEDGE AND ATTITUDE FINDINGS: EVIDENCE OF PRIOR PROGRAM IMPACT

This chapter presents data to support three major points:

1. that the historical model of the CASPAR Alcohol Education Program presented in Chapters I and IV is a more valid representation of the program for purposes of analyses than a logical across-grade-levels, across finite linear developmental model (see Chapters I and IV for details);
2. that the CASPAR Alcohol Education Program had a statistically significant impact in the Somerville schools in the two years prior to the conducting of the curriculum implementation, the evaluation of which is described in this report; and
3. that students in the Improper Implementation of the CASPAR Curriculum (IICC) intervention condition had slightly better pretest means than students in the Proper Implementation of the CASPAR Curriculum (PICC) and Rival Curriculum (RVCR) intervention conditions, and these differences need to be taken into account in the interpretation of pre to post changes.

This chapter, therefore, sets both the scene and the framework for the next which demonstrates the effectiveness of Proper Implementation of the CASPAR Curriculum through "tight" pre-to-post rather than "delayed" cross-sectional data.

Program Representation Models

Tables I, II, and III present Somerville students' percent correct, uncertain, and incorrect scores for the knowledge items on the pretest by grade, group, and level of primary prior exposure (LPPE). Tables Ia, IIa, and IIIa present the corresponding three way analysis of variance outcomes for Tables I, II and III. As can be seen from Tables Ia, IIa, and IIIa, there are strong grade and LPPE effects on all three knowledge response rates. A close examination of Tables I, II and III, however, will show that both the grade and the LPPE effects are not linear. Seventh and tenth grade students have significantly lower scores than eighth or twelfth grade students across both LPPE and group. However, tenth grade students are not significantly different from seventh grade students and twelfth graders are not significantly different from eighth graders.

The Grade and LPPE effects in Tables I, II and III, therefore, are actually disordinal and should produce interactions but do not due to categorical ANOVA procedures being "blind" to linear hypotheses. The

TABLE I

Percent Correct Knowledge Scores on the Pretest
by Grade, Group and Level of Primary Prior
Exposure (LPPE)

<u>Group A</u>						
LPPE:	Low			High		
GRADE	n	$\bar{x}$	s	n	$\bar{x}$	s
7	71	44.85	15.68	31	63.39	20.38
8	68	52.04	15.67	37	70.97	15.90
10	58	40.02	17.93	28	58.93	17.77
12	37	58.46	20.32	15	80.87	18.91
<u>Group B</u>						
LPPE:	Low			High		
GRADE	n	$\bar{x}$	s	n	$\bar{x}$	s
7	81	45.51	13.72	23	62.04	14.10
8	58	57.66	18.26	17	73.65	20.63
10	43	41.44	18.10	15	60.20	14.52
12	34	56.88	21.71	10	71.80	18.13

TABLE Ia

Anova Results for Percent Correct Scores on the
Pretest by Grade, Group, and Level of Primary
Prior Exposure (LPPE)

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Grade(GD)	3	8629.42	28.86	0.001
Group(GP)	1	217.47	0.73	0.999
LPPE	1	41292.54	138.11	0.001
GD x GP	3	383.82	1.28	0.278
GD x LPPE	3	15.57	0.05	0.999
GP x LPPE	1	210.77	0.70	0.999
GD x GP x LPPE	3	51.12	0.17	0.999
ERROR	610	298.98		

	<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GRADE: 7	200	49.81	50.10	
8	180	59.79	59.48	
10	144	46.23	45.97	
12	96	62.80	63.16	0.32
GROUP: A	345	54.09	53.31	
B	281	53.55	54.51	0.01
LPPE: Low	450	48.79	48.74	
High	176	66.79	66.91	0.40

Mult. R. .517

TABLE II

Percent Uncertain Knowledge Scores on the
Pretest by Grade, Group, and Level of
Primary Prior Exposure (LPPE)

Group A						
LPPE:	Low			High		
GRADE	n	$\bar{x}$	s	n	$\bar{x}$	s
7	71	20.56	17.21	31	12.26	13.02
8	68	17.62	14.77	37	8.35	12.08
10	58	16.50	13.86	28	9.82	13.83
12	37	12.70	14.30	15	6.87	12.41

Group B						
LPPE:	Low			High		
GRADE	n	$\bar{x}$	s	n	$\bar{x}$	s
7	81	18.90	15.20	23	9.35	12.85
8	58	12.30	14.82	17	6.82	9.49
10	43	15.09	16.11	15	11.73	11.36
12	34	15.03	15.15	10	6.10	12.69

TABLE IIa

Anova Results for Percent Uncertain Knowledge
Scores on the Pretest by Grade, Group, and Level
of Prior Primary Exposure (LPPE)

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Group(Gp)	1	485.02	2.29	0.126
Grade(GD)	1	935.51	4.42	0.005
LPPE	3	6899.44	32.59	0.001
GD x GP	3	213.05	6.00	0.390
Gp x LPPE	1	33.50	0.15	0.999
GD x LPPE	3	71.22	0.33	0.999
GD x GP x LPPE	3	80.44	0.38	0.999

ERROR

	<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GRADE: 7	206	17.41	17.37	
8	180	12.89	12.98	
10	144	14.28	14.33	
12	96	11.93	11.79	0.14
GROUP: A	345	14.93	15.35	
B	281	14.08	13.57	0.03
LPPE: Low	450	16.61	16.64	
High	176	9.29	9.21	0.22

Mult. R. 0.266

TABLE III

Percent Incorrect Knowledge Scores on the Pretest
by Grade, Group, and Level of Primary Prior
Exposure (LPPE)

<u>Group A</u>						
LPPE:	Low			High		
GRADE	n	$\bar{x}$	s	n	$\bar{x}$	s
7	71	34.59	15.27	31	24.36	16.17
8	68	30.34	13.58	37	20.68	11.58
10	58	43.48	18.02	28	31.25	14.55
12	37	28.84	18.31	34	28.09	16.84

<u>Group B</u>						
LPPE:	Low			High		
GRADE	n	$\bar{x}$	s	n	$\bar{x}$	s
7	81	35.59	13.97	23	28.61	13.56
8	58	30.31	15.80	17	19.53	14.87
10	43	43.47	15.67	15	28.07	14.46
12	34	28.09	16.84	10	22.10	17.32

TABLE IIIa

Anova Results for Percent Incorrect Knowledge
Scores on the Pretest by Grade, Group, and
Level of Prior Exposure (LPPE)

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Group (GP)	1	52.95	0.22	0.999
Grade (G _D)	3	5572.91	24.01	0.001
LPPE	1	14434.21	62.20	0.001
GD x GP	3	81.06	0.34	0.999
GP x LPPE	1	76.20	0.32	0.999
GD x LPPE	3	134.93	0.58	0.999
GD x GP x LPPE	3	203.36	0.87	0.999

ERROR

	<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GRADE: 7	206	32.77	32.54	
8	180	27.32	27.54	
10	144	39.49	39.70	
12	96	25.28	25.05	
				0.31
GROUP: A	345	30.97	31.34	
B	281	32.37	31.92	
				0.04
LPPE: Low	450	34.60	34.62	
High	176	23.92	23.88	
				0.29

Mult. R. 0.423

easiest way to demonstrate this fact is by entering the social desirability variable into the ANOVA analyses, since it is known that SD is an empirically linear variable across all grades (see Chapter V for details) and acts to adjust the data for response aberrations as well.¹

Table IV presents the ANOVA results for percent incorrect knowledge scores on the pretest by grade, group, level of ²prior primary exposure, and social desirability classification. As can be seen from Table IV, strong grade by group and grade by levels of prior primary exposure interactions are produced when the empirically linear-across-grades social desirability variable is entered into the analyses. In fact, there is almost significant Grade by LPPE by SD three-way interaction. The results given in Table IV clearly show that the results presented in Tables I, II, and III are in fact disordinal in nature. Such disordinal (non-linear) outcomes, however obvious, must be explained, as they are not what one would expect developmentally in terms of the data.³

As previously stated, the CASPAR Alcohol Education Program impacted the Somerville schools non-linearly during its first two years through the vehicle of classroom activities conducted by teachers as a requirement of their participation in the Basic and Methods Workshops (see Chapter I for details). One, therefore, must relate the historical nature of the teacher training component of the CASPAR Alcohol Education Program to student grade-levels in the present data by asking what kind of prior exposure (LPPE) each grade (and thus student) could have had in the previous year.

Seventh graders obviously could not have had too much exposure in the previous year as only a few upper-elementary teachers were in training and the mandate for teaching alcohol education in the Somerville schools at that time was only for the seventh, eighth and twelfth grades (see Chapter I for details). Eighth graders on the other hand could have received a considerable amount of exposure in the previous year as quite a few seventh grade teachers were either in training or had completed training.

¹The exact same kinds of results were observed for attitude items as reported above. These results are presented in Appendix W.

²Only percent incorrect knowledge results are presented as (1) this variable is the most stringent criterion by which any hypothesis about this data can be evaluated (see Chapter V for details) and (2) the results for the other two response rates were the same.

³The exact same kind of results were observed for the attitude items as reported above. These results are presented in Appendix IV.

Table IV

ANOVA Results for Percent Incorrect Knowledge Scores on the
Pretest by Grade, Group, Level of Prior Primary Exposure and
Social Desirability Classification

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>P</u>
Group (GP)	1	2012.8	9.2	<.003
Grade (GR)	3	1508.2	6.9	<.001
LPPE	1	2488.2	11.4	<.001
SD	1	1266.9	5.8	<.01
GP x GR	3	1052.9	4.8	<.003**
GP x LPPE	1	407.9	1.9	<.16
GP x SD	1	176.9	0.8	>.05
GR x LPPE	3	699.9	3.2	<.02**
GR x SD	3	412.6	1.9	<.13
LPPE x SD	1	20.3	0.0	>.05
GP x GR x SD	3	496.3	2.3	<.08*
GP x GR x LPPE	3	138.7	0.6	>.05
GP x LPPE x SD	1	8.5	0.0	>.05
GR x LPPE x SD	3	400.2	1.8	<.14

	<u>n</u>	<u>Unadjusted Mean</u>	<u>Adjusted Mean</u>	<u>ETA</u>
GROUP: A	332	28.08	28.19	
B	272	32.00	31.88	.12
GRADE: 7	252	32.14	31.80	
8	197	29.03	29.02	
10	85	30.30	31.78	
12	70	23.00	22.73	.18
LPPE: Low	344	31.38	31.68	
High	260	27.83	27.41	.14
SD: Low	310	27.89	28.41	
High	294	31.92	31.47	.10

Mult. R. = .27

An examination of the teacher training flow statistics given in Chapter I, moreover, will show that what has just been said about eighth graders also holds for twelfth graders. However, an examination of the teacher training flow statistics given in Chapter I will show that tenth graders were missed and could have only had a low degree of exposure in the prior year or the one before that due to the non-linear development of the teacher training component. Tenth graders are identical to seventh graders due to historically less prior exposure and eighth graders are identical due to an equivalency of prior exposure. Although this historical tracing explains the grade-level disordinalities in Tables I, II, and III, it does not explain the interaction under levels of prior exposure in Table IV. Explaining, supporting, and then remediating the LPPE interactions, however, is a three step process.¹

Given the historical tracing presented above and the data presented in Tables I, II, and III, one may create a new variable for the purposes of analyzing the data called Prior Program Activity Grades (PPAG). All seventh and tenth graders added together would constitute the Low category on this variable (students who in the prior year were in grades where there were low program activities), and all eighth and twelfth grade students added together would constitute the High category of this variable. If the interactions observed under levels of prior primary exposure in Table IV (and thus Tables I, II, and III) are due to systematic within-category variations by grade in LPPE that are not adequately captured by the cutting score procedure used to create levels of the LPPE variable (see Chapter IV), then a strong linear pattern should be observed on the "number of lessons students reported receiving" variable when LPPE is crossed with PPAG. This same type of linear pattern moreover, should also be observed in terms of student reports of in-depth contact with peer leaders (see Chapter IV for details), if the reasoning expressed in this paragraph is correct.

Table V presents a two-way analysis of variance on number of prior lessons reported by students by prior primary exposure levels (LPPE) and prior program activity grades (PPAG). As can be seen from Table V, the LPPE by PPAG pattern is strongly linear. High PPAG students in general reported receiving more alcohol education sessions from CASPAR-trained teachers than low PPAG students at the .001 level, and High LPPE students report receiving more alcohol education sessions than low LPPE students at the .001 level. However, there are statistically significant within-level differences between all of the cells presented

¹The LPPE interactions obviously come from within-category variations not adequately captured by the cutting score procedure used to create this variable originally (see Chapter IV). The procedures to be outlined here are nothing more than a convenient and quick rescaling of the original micro-level data for the purposes of analysis, parsimony, and clear presentation of the data. That the LPPE interaction was found is the evidence for the validity of the historical model. Empirically the validity only needs to be supported in terms of an analysis model.

Table V

Percentages of Students Reporting In-Depth Contact with CASPAR
Peer Leaders by Level of Prior Primary Exposure (LPPE) and Prior
Program Activity Grades (PPAG)

	<u>Low LPPE</u>		<u>High LPPE</u>	
	<u>n</u>	<u>P</u>	<u>n</u>	<u>P</u>
Low PPAG	253	1.6%	97	6.2%
High PPAG	197	5.1%	79	12.6%

All proportions significantly different from each other at the
.001 level using Fischer's Z-test for proportions. Data based
on students in cycles 2, 3, and 4.

in Table V for both PPAG and LPPE at the .01 level. The LPPE interactions observed in Table IV, therefore, were due to statistically significant within-category differences on LPPE by grade level. Low LPPE students in high prior program activity grades reported receiving more prior alcohol education sessions than low LPPE students in low prior program activity grades. The same statement is true in terms of High LPPE students and levels of PPAG. The historical (non-linear) model of the CASPAR Alcohol Education Program is supported empirically by student reports on the number of prior sessions received.

Table VI presents the percentages of students reporting in-depth peer leader contact by levels of prior exposure (LPPE) and prior program activity grades (PPAG). As can be seen from Table VI, the LPPE by PPAG pattern is again strongly linear at the .001 level of significance using Fischer 2-tests for proportions. Although the percentage of students who report having in-depth peer leader contact is small (5% of all students sampled), the LPPE by PPAG results are almost identical to those presented in Table V in terms of number of prior sessions reported by students. The validity of the historical model of the CASPAR Alcohol Education Program and the explanations of the LPPE interactions in Table IV (and thus in Tables I, II, and III) is empirically supported once again by students' reports of in-depth contact with CASPAR peer leaders.

The analytical consequences of the findings reported above are as follows:

(1) The historical model of the CASPAR Alcohol Education Program will be employed in the reporting of all analyses. Grade-level breakdown and results will be put in appendices so that (a) they may be recovered by the skeptical reader, and (b) they will not be lost in terms of future use by other evaluators in other programs. No significant differences between seventh and tenth grade or between eighth and twelfth grade were found in terms of the many tests the evaluators ran to disprove the historical model. The model seems to be a very sound representation of the CASPAR program and its prior effects.

(2) The PPAG (Prior Program Activity Grades) variable will be kept and employed in displaying the data on Prior CASPAR Program Impact in Somerville, simply because the four-fold Table displays give the clearest representation of the data in terms of both PPAG and LPPE effects. After presentation of the prior impact data, PPAG and LPPE will be additively combined to produce a new one-dimensional variable called CLPPE (Combined Level of Prior Primary Exposure). The CLPPE variable is simply a linear rearrangement of the PPAG and LPPE cells for the purposes of data analysis as given below.

Table VI

Number of Prior Sessions Reported by Students by Levels of Primary
Prior Exposure (LPPE) and Prior Program Activity Grades (PPAG)

<u>LPPE</u>						
<u>Low</u>				<u>High</u>		
<u>PPAG</u>	<u>n</u>	<u>X</u>	<u>S</u>	<u>n</u>	<u>X</u>	<u>S</u>
Low	234	0.86	0.50	111	4.7	0.52
High	216	2.2	0.61	65	5.8	0.41

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>P</u>
PPAG	1	1.49	82.8	<.001
LPPE	1	13.80	766.7	<.001
PPAG x LPPE	1	0.02	1.1	>.05
ERROR	622	0.018		

PPAG = Prior Program Activity Grades: Low-grades 7 and 10
High-grades 8 and 12

LPPE = Level of Prior Primary Exposure

LPPE

		Low	High
PPAG	Low	Minimal Prior Exposure (priming)	Moderate Prior Exposure (priming)
	High	Low Prior Exposure (priming)	High Prior Exposure (priming)

CLPPE

Minimal	Low	Moderate	High
---------	-----	----------	------

The advantages of combining the LPPE and PPAG variables into one variable (CLPPE) are (1) it allows all analyses to be done as three-way rather than four-way ANOVAS when type of intervention is added into the design, (2) it eliminates the SD factor from the design, and (3) it allows the data from the rival curriculum community to be reaggregated in terms of the Somerville model. It should be noted that CLPPE is in reality a double classification variable. This is to say, assignments to categories of CLPPE are arrived at by double estimation (namely, two partially independent probabilistic estimators) which acts to enhance both the reliability and the validity of each student's final exposure classification, given the nature of the micro-level data on which the original classifications were based (namely, LPPE and grade). The creation of CLPPE, therefore, is somewhat like using Heisenberg's uncertainty principle to definitively index the data.

(3) In terms of reaggregating the rival curriculum data, seventh graders were assigned to the low PPAG category and 8th and 9th graders assigned to the high PPAG category before making the combination with LPPE as specified in the diagram above. These PPAG assignments were the logical ones to make in terms of reaggregating the data from the rival community in terms of the CASPAR historical model; and

(4) Reaggregating the rival community's data as described above creates spurious interaction in the between-communities pretest data due to the rival community's data not fitting the historical CASPAR model. There could be no better cross-validation evidence for the CASPAR historical model, but these spurious interactions do create some problems in the reading of tables. Precise summaries, therefore, will be given.

Given the evidence that has been presented concerning the validity of the historical model of the CASPAR Program and the necessary reaggregations that must be made in the data due to this fact, the evidence for the prior impact of the CASPAR Alcohol Education Program may now be examined.

Prior Program Impact

Tables VII, VIII and IX present Somerville students' percent correct, uncertain, and incorrect scores for the knowledge items on the pretest by groups, Level of Prior Primary Exposure (LPPE), and Prior Program Activity Grades (PPAG). Tables VIIa, VIIIa, and IXa present the main effects means for Tables VII, VIII, and IX. Table X presents a summary of the cell means presented in Tables VII, VIII and IX, and Table XI presents a summary of all the F-ratio effects observed across each of the three response rates.¹ A summary of the findings presented in Tables VII to XI is given below:²

(1) Students with a high level of prior primary exposure (LPPE) answered significantly more knowledge items correctly on the pretest than students with low levels of prior primary exposure at the .001 level of significance. Students in high Prior Program Activity Grades (PPAG) answered significantly more knowledge items correctly on the pretest than students in low Prior Program Activity Grades at the .001 level of significance. No interactions were observed; the effects, therefore, were linear. The LPPE effect, however, was twice as strong as the PPAG effect, indicating that some sufficiently high level of exposure was necessary to produce a mean percent correct score above the chance level. An examination of Table VII or Table XI will show the reader that Low LPPE-Low PPAG students responded at slightly above chance level on the pretest.³

¹The reader will probably find Tables X and XI to be most helpful in terms of following the discussion.

²All ANOVA's were run using Version 6 of the SPSS analysis package available at Boston University. This package adjusts each main effect mean of the design via multiple regression procedures, but the adjustments are not step-wise as in Finn's MANOVA package. If time had permitted, Finn's MANOVA package would have been used to analyze the data (thus reducing the number of tables) but the effects observed are so pronounced as to make the matter one of no consequence.

³The reader should note that a group effect is not present in Tables VII to XI due to the following fact. For a percentage of students in both A and B groups, the pretest is actually a delayed post-test in terms of prior instruction. For other students in both groups the pretest is really a pretest and when these two kinds of students are averaged together the A-B group effect disappears. The reader will see later that there are significant differences between A and B group which are simply being masked presently in the analyses due to the nature of the design (i.e. LPPE by PPAG).

Table VII

Percent Correct Knowledge Scores on the Pretest by Group, Level of Prior Primary Exposure, and Prior Program Activity Grades (N=626)

		<u>A Groups</u>				<u>B Groups</u>			
		<u>LPPE: Low</u>		<u>High</u>		<u>Low</u>		<u>High</u>	
		<u>n</u>	<u>x</u>	<u>n</u>	<u>x</u>	<u>n</u>	<u>x</u>	<u>n</u>	<u>x</u>
Low	PPAG	129	42.7	59	61.3	124	44.0	38	61.3
High	PPAG	105	54.4	52	73.8	92	57.3	27	73.0

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>P</u>
Group (G)	1	333.4	1.1	>.05
LPPE	1	40695.8	135.2	<.001*
PPAG	1	23608.8	78.5	<.001*
G x LPPE	1	185.5	0.61	>.05
G x PPAG	1	34.8	0.12	>.05
LPPE x PPAG	1	0.19	0.00	>.05
G x LPPE x PPAG	1	47.9	0.16	>.05
Error	618	300.9		
Mult. R. = .51				

Group A = Best Groups (Upper Limit Estimate of Effects)

Group B = Worst Groups (Lower Limit Estimate of Effects)

LPPE = Level of Prior Primary Exposure (Estimator)

PPAG = Prior Program Activity Grades

Table VIIa

Main Effects for Percent Correct Knowledge Scores on the Pretest
By Group, Level of Prior Primary Exposure and Prior Program
Activity Grades (N=626)

<u>Source</u>	<u>N</u>	<u>Unadjusted Mean</u>	<u>Adjusted Mean</u>	<u>F</u>	<u>P</u>
A Groups	345	54.09	53.19	1.1	>.05
B Groups	281	53.55	54.66		
Low LPPE	450	48.79	48.39	135.2	<.001
High LPPE	176	60.83	60.77		
Low PPAG	350	48.34	48.21	78.5	<.001
High PPAG	276	60.83	60.67		

Mult. R. = .51

A Groups = Best Groups (Upper Limit Estimate of Effects)

B Groups = Worst Groups (Lower Limit Estimate of Effects)

LPPE = Level of Prior Primary Exposure (Estimator)

PPAG = Prior Program Activity Grades

Table VIII

Percent Uncertain Knowledge Scores on the Pretest by Group, Level of Prior Primary Exposure, and Prior Program Activity Grades (N=626)

	<u>A Groups</u>				<u>B Groups</u>			
	LPPE: <u>Low</u>		<u>High</u>		<u>Low</u>		<u>High</u>	
	n	x	n	x	n	x	n	x
Low PPAG	129	18.7	59	11.1	124	17.6	38	10.3
High PPAG	105	15.9	52	7.9	92	13.1	27	6.6

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>P</u>
Group (G)	1	411.1	1.94	>.05
LPPE	1	6972.1	32.90	<.001*
PPAG	1	1941.6	9.16	<.003*
G x LPPE	1	18.9	.09	>.05
G x PPAG	1	64.9	.31	>.05
LPPE x PPAG	1	.2	.00	>.05
G x LPPE x PPAG	1	7.9	.04	>.05
Error	618	211.9		

Mult. R. = .25

A Groups = Best Groups (Upper Limit Estimate of Effects)

B Groups = Worst Groups (Lower Limit Estimate of Effects)

LPPE = Level of Prior Primary Exposure (Estimator)

PPAG = Prior Program Activity Grades

Note well: Means are percentages of the total number of items presented.

Table VIIIA

Main Effects for Percent Uncertain Knowledge Scores by Group,
Level of Prior Primary Exposure, and Prior Program Activity
Grades (N=626)

<u>Source</u>	<u>N</u>	<u>Unadjusted Mean</u>	<u>Adjusted Mean</u>	<u>F</u>	<u>P</u>
A Groups	345	14.93	15.29	1.94	>.05
B Groups	281	14.08	13.65		
Low LPPE	450	16.61	16.65	32.90	<.001
High LPPE	176	9.29	9.19		
Low PPAG	350	16.12	16.11	9.16	<.003
High PPAG	276	12.56	12.57		

Mult. R. = .25

A Groups = Best Groups (Upper Limit Estimate of Effects)

B Groups = Worst Groups (Lower Limit Estimate of Effects)

LPPE = Level of Prior Primary Exposure (Estimator)

PPAG = Prior Program Activity Grades

Table IX

Percent Incorrect Knowledge Scores on the Pretest by Group, Level of Prior Primary Exposure, and Prior Program Activity Grades (N=626)

	<u>A Groups</u>				<u>B Groups</u>			
	LPPE: <u>Low</u>		<u>High</u>		<u>Low</u>		<u>High</u>	
	<u>n</u>	<u>x</u>	<u>n</u>	<u>x</u>	<u>n</u>	<u>x</u>	<u>n</u>	<u>x</u>
Low PPAG	129	38.6	59	27.6	124	38.3	38	28.4
High PPAG	105	29.8	52	18.3	92	29.5	27	20.5

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>P</u>
Group (G)	1	4.1	.02	>.05
LPPE	1	13978.9	58.58	<.001*
PPAG	1	12009.4	50.33	<.001*
G x LPPE	1	86.1	.36	>.05
G x PPAG	1	4.6	.02	>.05
LPPE x PPAG	1	0.0	.00	>.05
G x LPPE x PPAG	1	17.0	.07	>.05
Error	618	238.6		

Mult. R = .39

A Groups = Best Groups (Upper Limit Estimate of Effects)

B Groups = Worst Groups (Lower Limit Estimate of Effects)

LPPE = Level of Prior Primary Exposure (Estimator)

PPAG = Prior Program Activity Grades

Note well: Means are percentages of total number of items presented.

Table IXa

Main Effects for Percent Incorrect Knowledge Scores by Group, Level of Prior Primary Exposure, and Prior Program Activity Grades (N=626)

<u>Source</u>	<u>N</u>	<u>Unadjusted Mean</u>	<u>Adjusted Mean</u>	<u>F</u>	<u>P</u>
A Groups	345	30.97	31.53	.02	>.05
B Groups	281	32.37	31.69		
Low LPPE	450	34.60	34.57	50.58	<.001
High LPPE	176	23.92	24.01		
Low PPAG	350	35.54	35.49	50.33	<.001
High PPAG	276	26.61	26.67		

Mult. R. = .39

A Groups = Best Groups (Upper Limit Estimate of Effects)

B Groups = Worst Groups (Lower Limit Estimate of Effects)

LPPE = Level of Prior Primary Exposure (Estimator)

PPAG = Prior Program Activity Grades

Table X

Summary of Pretest Knowledge Score Percentages by Group, Level of Prior Primary Exposure, and Prior Program Activity Grades (N=626)

<u>Combinations</u>		<u>n</u>	<u>Percent Correct</u>	<u>A Groups</u>	
				<u>Percent Uncertain</u>	<u>Percent Incorrect</u>
Low LPPE	Low PPAG	129	42.7	18.7	38.6
Low LPPE	High PPAG	105	54.4	15.9	29.8
High LPPE	Low PPAG	50	61.3	11.1	27.6
High LPPE	High PPAG	52	73.8	7.9	18.3

		<u>n</u>	<u>Percent Correct</u>	<u>B Groups</u>	
				<u>Percent Uncertain</u>	<u>Percent Incorrect</u>
Low LPPE	Low PPAG	124	44.0	17.6	38.3
Low LPPE	High PPAG	92	57.3	13.1	29.5
High LPPE	Low PPAG	38	61.3	10.3	28.4
High LPPE	High PPAG	27	73.0	6.6	20.5

LPPE = Level of Prior Primary Exposure to the CASPAR Program

PPAG = Prior Program Activity Grades

A Groups = Best Groups (Upper Limit Estimator of Effects)

B Groups = Worst Groups (Lower Limit Estimator of Effects)

Table XI

Summary of F-Ratios for Pretest Knowledge Score Percentages by Group, Level of Prior Primary Exposure and Prior Program Activity Grades (N=626)

<u>Source</u>	<u>df</u>	<u>Percent Correct</u>	<u>Percent Uncertain</u>	<u>Percent Incorrect</u>
Group (G)	1	1.1	1.9	0.0
LPPE	1	135.2*	32.9*	58.6*
PPAG	1	78.5*	9.2*	50.3*
G x LPPE	1	0.6	0.1	0.4
G x PPAG	1	0.1	0.3	0.0
LPPE x PPAG	1	0.0	0.0	0.0
G x LPPE x PPAG	1	0.2	0.0	0.1
Error	618			

p < .05

Group = A Groups (Best) - B Groups (Worst)

LPPE = Level of Prior Primary Exposure

PPAG = Prior Program Activity Grades

(2) Students with a high level of primary prior exposure (LPPE) answered significantly fewer knowledge items uncertain than students with low levels of primary prior exposure at the .001 level of significance. Students in high Prior Program Activity Grades (PPAG) answered significantly fewer knowledge items uncertain than students in low Prior Program Activity Grades at the .003 level of significance. No LPPE by PPAG interaction was observed; the effects, therefore, were again linear. The LPPE effect, however, was three times as strong as the PPAG effect, indicating a need for further explanation. The explanation the evaluators consider to be the best is as follows:

(a) the number of items a student attempts to respond to is a function of the amount of prior exposure to the content that the student has had. Students who have had least exposure to the content attempt to answer fewer items. These students declare their lack of knowledge (or ambiguity) through use of the uncertain response; and,

(b) the number of items a student attempts to respond to is a linear function of the amount of prior exposure to the content, the more items the student attempts to respond to regardless of whether the student's responses are correct or incorrect. The implication of this point is that one should expect uncertain response rates to decrease with exposure (pre to post) but such decreases do not necessarily mean that there has been an increase in correct responses. Thus the need for the mode analysis employed here and the scaling procedures outlined in Chapter IV for plotting the nature of pre to post change.

Overall, the uncertain response rate results for the knowledge items attest to the validity of the data obtained.¹

(3) Students with a high level of prior primary exposure (LPPE) answered significantly fewer knowledge items incorrectly on the pretest than students with a low level of primary prior exposure at the .001 level of significance. Students in high Prior Program Activity Grades (PPAG) answered significantly fewer knowledge items incorrectly on the

¹The reader should better understand the relationship between the social desirability measure and dependent variable responses given the results presented for uncertain responses above. Social desirability measures are conventionally construed as being compliance, acquiescence or scale measures. Students with the least amount of exposure had the highest uncertain response rate. The SD measure used (namely the high category) best predicts uncertain response rates. Therefore students with high social desirability scores tended to use the uncertain category more than students with low social desirability scores; namely they complied and followed the test directions as given. There is an intervening variable in terms of the response topology but that variable is test-taking behavior. Many findings between myth-belief and SD, therefore, may be no more than a spurious product of the forced-choice myth-belief scales used.

pretest than students with low levels of primary prior exposure at the .001 level of significance. Students in high Prior Program Activity Grades (PPAG) answered significantly fewer knowledge items incorrectly on the pretest than students in Low Prior Program Activity Grades at the .001 level of significance. No interactions were observed in terms of percent incorrect scores (see Table IX); however, the LPPE effect was equal to the PPAG effect which means that the effects were not proportionately linear. As can be seen from Table IX, it is the low LPPE-Low PPAG students and the High LPPE-PPAG students who significantly differ from the other two categories. Minimal exposure, therefore, produces the highest incorrect response rate and high exposure produces the lowest incorrect response rate but varying amounts of moderate exposure produce incorrect response rates that fall half-way in between the two "extremes." The reader should note, however, that regardless of the level of exposure, no student can be said (as a generalization) to have a high incorrect response rate on the pretest in terms of knowledge items. In fact, if the correct response rate of students with the least amount of exposure is compared with their correct and uncertain response rates, the reader will see that the incorrect response rate of students with the least amount of prior exposure is close to the chance level (see Table XI). Students in this sample just cannot be characterized as believing in myths. Such a characterization of the predominant beliefs of any kind of student as a generalization is simply specious and cannot be supported by the data (see Chapter V for further details).¹

(4) A finding that might not be readily apparent to the reader from a quick inspection of Tables VII to IX is that it seems that CASPAR teachers tended to conduct their teaching activities required as part of CASPAR training model workshops with A group rather than B group students. The number of students in the low exposure categories for both A and B groups are nearly equivalent. However, after that point they quickly begin to become disproportionate until at the high prior exposure level there are 50% more A group students than B group students (see Table X). These disproportionalities may in part be due to mortality rates (see Chapter IV) but this explanation seems somewhat doubtful given the equivalence observed in the minimal exposure category.

¹From the above discussion and results, it should be clear to the reader why all three response rates are necessary in terms of analyzing the data obtained. Low knowledge scores do not necessarily imply high myth belief scores in an inverse one-to-one way. In fact low correct score rates tend to indicate a random or "no definition" response pattern rather than any other kind of profile. Incorrect response rates, therefore, are the best and most stringent criterion for assessing effects as they are least subject to misinterpretation and spurious factors; namely, one could increase correct response rates without decreasing incorrect response rates which would indicate a result that was quite different from the one that would be obtained from conventional analyses of the data.

This finding is important and should be noted for two reasons:

(1) B group students from all indicators available (see next section and Chapters VII, VIII and IX) are the students most in need of alcohol education, and (2) some of the pre-to-post curriculum results and delayed post results for teachers (see Chapters VII-X) may be best explained in terms of low prior contact with B group students in terms of conducting alcohol education activities. Uncontrolled tryout of lessons in terms of student-type therefore, may be a minor, but important "long-run" weakness in the teacher-training component of the CASPAR Alcohol Education Program. The data is too inconclusive to make the statement strongly but the point should be well noted in terms of data interpretation and future training.

From the data presented in Tables VII to XI, it would seem that one could conclude that the CASPAR Alcohol Education Program most probably increased the knowledge levels and decreased the myth belief levels of students in Somerville over the course of the program's first two years.

Tables XII, XIII, and XIV present Somerville students' percent correct (positive), uncertain (undecided) and incorrect (negative) scores for the attitude items on the pre-test by groups, Level of Primary Prior Exposure (LPPE), and Prior Program Activity Grades (PPAG). Tables XIIa, XIIIa and XIVa present the main effect means for Tables XII, XIII, and XIV. Table XV presents a summary of the cell means presented in Tables XII, XIII, XIV, and Table XVI presents a summary of all of the F-ratio effects observed across each of the three response rates. A summary of the findings presented in Tables XII to XVI is given below:

(1) Students with a high level of prior primary exposure answered significantly more attitude items positively on the pre-test than students with low levels of prior primary exposure at the .001 level of significance. Students in high prior program activity grades (PPAG) answered significantly more attitude items positively than students in low prior program activity grades on the pre-test at .001 level of significance. A PPAG by group interaction was observed, however, indicating that the LPPE and PPAG effects were not linear or homogeneous across all students or levels of design. As can be seen from Table XII, LPPE and PPAG effects were linear for A group students but disordinal for B group students. B group students with low LPPE and high PPAG had more positive attitudes than students with high LPPE and low PPAG (minimally exposed). A group students, moreover, had significantly more positive attitudes on the pre-test than minimally exposed B group students. Obviously, these outcomes are in need of some kind of explanation.

The non-linear outcomes observed in Table XII might be due to any or all of the following factors:

Table XII

Percent Positive Attitude Scores on the Pretest by Group, Level of Prior Primary Exposure, and Prior Program Activity Grades (N=626)

		<u>A Groups</u>				<u>B Groups</u>			
		<u>LPPE: Low</u>		<u>High</u>		<u>Low</u>		<u>High</u>	
		<u>n</u>	<u>x</u>	<u>n</u>	<u>x</u>	<u>n</u>	<u>x</u>	<u>n</u>	<u>x</u>
Low	PPAG	129	62.9	59	73.3	124	58.4	38	65.8
High	PPAG	105	70.3	52	78.0	92	71.4	27	74.6

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>P</u>
Group (G)	1	1383.5	5.22	<.02*
LPPE	1	7529.5	28.38	<.001*
PPAG	1	12512.7	47.16	<.001*
G x LPPE	1	408.2	1.54	> .05
G x PPAG	1	1040.87	3.92	<.045*
LPPE x PPAG	1	339.5	1.28	>.05
G x LPPE x PPAG	1	14.6	.06	>.05
Error	618	265.3		

Mult. R. = .35

A Groups = Best Groups (Upper Limit Estimate of Effects)

B Groups = Worst Groups (Lower Limit Estimate of Effects)

LPPE = Level of Prior Primary Exposure to the CASPAR Program (Estimator)

PPAG = Prior Program Activity Grades

Table XIIa

Main Effect for Percent Positive Attitude Scores on the Pretest
By Group, Level of Primary Prior Exposure and Prior Program
Activity Grades (N=626)

<u>Source</u>	<u>N</u>	<u>Unadjusted Mean</u>	<u>Adjusted Mean</u>	<u>F</u>	<u>P</u>
A Groups	345	69.18	68.74	5.22	<.02
B Groups	281	65.19	65.73		
Low LPPE	450	65.09	65.21	28.38	<.001
High LPPE	176	73.27	72.96		
Low PPAG	350	63.34	63.42	47.16	<.001
High PPAG	276	72.52	72.43		

Mult. R. = .35

A Groups = Best Groups (Upper Limit Estimate of Effects)

B Groups = Worst Groups (Lower Limit Estimate of Effects)

LPPE = Level of Prior Primary Exposure to the CASPAR Program (Estimator)

PPAG = Prior Program Activity Grades

Table XIII

Percent Undecided Attitude Scores on the Pretest by Group, Level of Prior Primary Exposure, and Prior Program Activity Grades (N=626)

	<u>A Groups</u>				<u>B Groups</u>			
	<u>LPPE: Low</u>		<u>High</u>		<u>Low</u>		<u>High</u>	
	<u>n</u>	<u>x</u>	<u>n</u>	<u>x</u>	<u>n</u>	<u>x</u>	<u>n</u>	<u>x</u>
Low PPAG	129	12.5	59	7.3	124	11.9	38	5.7
High PPAG	105	9.8	52	5.0	92	5.6	27	5.4

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>P</u>
Group (G)	1	510.5	3.43	>.05
LPPE	1	2540.6	17.08	<.001
PPAG	1	2002.5	13.46	<.001
G x LPPE	1	63.2	.43	>.05
G x PPAG	1	167.2	1.12	>.05
LPPE x PPAG	1	221.2	1.49	>.05
G x LPPE x PPAG	1	227.2	1.53	>.05
Error	618	148.7		

Mult. R. = .22

A Groups = Best Groups (Upper Limit Estimate of Effects)

B Groups = Worst Groups (Lower Limit Estimate of Effects)

LPPE = Level of Prior Primary Exposure to the CASPAR Program (Estimator)

PPAG = Prior Program Activity Grades

Table XIIIa

Main Effects for Percent Undecided Attitude Scores on the Pretest
by Group, Level of Prior Primary Exposure, and Prior Program
Activity Grades (N=626)

<u>Source</u>	<u>N</u>	<u>Unadjusted Mean</u>	<u>Adjusted Mean</u>	<u>F</u>	<u>P</u>
A Groups	345	9.68	9.91	3.43	>.05
B Groups	281	8.37	8.08		
Low LPPE	450	10.31	10.36	17.08	<.001
High LPPE	176	5.97	5.85		
Low PPAG	350	10.67	10.68	13.46	<.001
High PPAG	276	7.08	7.07		

Mult. R. = .22

A Groups = Best Groups (Upper Limit Estimate of Effects)

B Groups = Worst Groups (Lower Limit Estimate of Effects)

LPPE = Level of Prior Primary Exposure to the CASPAR Program (Estimator)

PPAG = Prior Program Activity Grades

Table XIV

Percent Negative Attitude Scores on the Pretest by Group, Level of Prior Primary Exposure, and Prior Program Activity Grades (N=626)

	<u>A Groups</u>				<u>B Groups</u>			
	LPPE:	<u>Low</u>		<u>High</u>	<u>Low</u>		<u>High</u>	
		<u>n</u>	x	<u>n</u>	<u>n</u>	x	<u>n</u>	x
Low PPAG		129	23.9	59	124	29.1	38	27.8
High PPAG		105	19.7	52	92	22.7	27	19.5

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>P</u>
Group (G)	1	3540.4	16.32	<.001*
LPPE	1	1389.6	6.41	<.011*
PPAG	1	3880.1	17.88	<.001*
G x LPPE	1	138.7	.64	> .05
G x PPAG	1	403.4	1.86	> .05
LPPE x PPAG	1	7.7	.04	> .05
G x LPPE x PPAG	1	115.3	.53	> .05
Error	618	217.0		

Mult. R. = .26

A Groups = Best Groups (Upper Limit Estimate of Effects)

B Groups = Worst Groups (Lower Limit Estimate of Effects)

LPPE = Level of Prior Primary Exposure to the CASPAR Program (Estimator)

PPAG = Prior Program Activity Grades

Table XIVA

Main Effects for Percent Negative Attitude Scores on the Pretest by Group Level of Prior Primary Exposure and Prior Program Activity Grades (N=626)

<u>Source</u>	<u>N</u>	<u>Unadjusted Mean</u>	<u>Adjusted Mean</u>	<u>F</u>	<u>p</u>
A Group	345	20.62	20.82	16.32	<.001
B Group	281	25.88	25.63		
Low LPPE	450	24.08	23.92	6.41	<.011
High LPPE	176	20.16	20.59		
Low PPAG	350	25.27	25.19	17.88	<.001
High PPAG	276	20.07	20.17		
Mult. R = .26					

A Group = Best Group (Upper Limit Estimate of Effects)

B Group = Worst Group (Lower Limit Estimate of Effects)

LPPE = Level of Prior Primary Exposure to the CASPAR Program (Estimator)

PPAG = Prior Program Activity Grade

Table XV

Summary of Pretest Attitude Percentages by Group, Level of Primary Prior Exposure, and Prior Program Activity Grades (N=626)

		<u>A Groups</u>		
<u>Combinations</u>	<u>n</u>	<u>Percent Correct (Positive)</u>	<u>Percent Uncertain (Undecided)</u>	<u>Percent Incorrect (Negative)</u>
Low LPPE - Low PPAG	129	62.9	12.5	23.9
Low LPPE - High PPAG	105	70.3	9.8	19.7
High LPPE - Low PPAG	59	73.3	7.3	18.7
High LPPE - High PPAG	52	78.0	5.0	16.6

		<u>B Groups</u>		
Low LPPE - Low PPAG	124	58.4	11.9	29.1
Low LPPE - High PPAG	92	71.4	5.6	22.7
High LPPE - Low PPAG	38	65.8	5.7	27.8
High LPPE - High PPAG	27	74.6	5.4	19.5

A Group = Best Groups (Upper Limit Estimate of Effects)

B Group = Worst Groups (Lower Limit Estimate of Effects)

LPPE = Level of Prior Primary Exposure to the CASPAR Program

PPAG = Prior Program Activity Grades

Table XVI

Summary of F-Ratios for Pretest Attitude Score Percentages by Group, Level of Prior Primary Exposure, and Prior Program Activity Grades (N=626)

<u>Source</u>	<u>df</u>	<u>Percent Correct (Positive)</u>	<u>Percent Uncertain (Undecided)</u>	<u>Percent Incorrect (Negative)</u>
Group(G)	1	5.2*	3.43	16.3*
LPPE	1	28.4*	17.1*	6.4*
PPAG	1	47.2*	13.5*	17.9*
G x LPPE	1	1.5	0.4	0.6
G x PPAG	1	3.9*	1.1	1.9
LPPE x PPAG	1	1.3	1.5	0.0
G x LPPE x PPAG	1	0.1	1.5	0.5
Error	618			

Group = Best Groups (A) - Worst Groups (B)

LPPE = Level of Prior Primary Exposure to the CASPAR Program

PPAG = Prior Program Activity Grades

(a) From Table V it can be seen that the lowest level of in-depth CASPAR peer leader activity in high performance activity grades is approximately equal to their highest level of in-depth activity in low program activity grades. Assuming that CASPAR Peer Leaders tend to interact equally with A and B group students, (rather than avoiding B group students to some significant degree), the disordinal outcomes observed in Table XII could be due to the influence of CASPAR Peer Leaders. It should also be noted that only 5% of the students reported in-depth contact with Peer Leaders when considering this hypothesis as opposed to others.

(b) The within grade permeation effect observed in both reliability studies (see Chapter V) might attitudinally be as strong over time as sources of direct exposure;

(c) B group students may initially have more negative attitudes than A group students (see Rival Curriculum Groups pre-test results at the end of this chapter for support of this point) and when exposed to sporadic non-directive discussions about opinions come to conclusions that are different from A group students in the CASPAR Program (see Chapter VII for details); and,

(d) One or more uncontrolled variables differentially affect the opinions of the B group students.

Further analysis is needed to support any one or more of the above points, but the reader should note that the pre-test attitudes of all students were essentially positive (about 50%) with Prior Program Exposed students all having means above 65%.

(2) Students with a high level of prior primary exposure (LPPE) answered significantly fewer attitude items undecided on the pre-test than students with low levels of prior primary exposure at the .001 level of significance. Students in high prior program activity grades (PPAG) answered significantly fewer attitude items undecided on the pre-test than students in low Prior Program Activity Grades at the .001 level of significance. There were no interactions and no group effect indicating once again the presence of a threshold effect. All students with exposure were significantly less undecided than students with only minimal exposure.

The results for the percent undecided response for the attitude items on the pre-test are identical to the results found for the percent uncertain responses for the knowledge items (see Table VIII). The evaluators, therefore, interpret the results obtained for the percent undecided responses for the attitude items as attesting to the validity of the data obtained in the same ways as the results for the uncertain responses for the knowledge items did (see the knowledge results section for details). The evaluators, however, also see the results for the percent undecided responses for the attitude items of the pre-test as being supportive of explanations (b) and (c) outlined above; namely, the within grade permeation effect and the sporadic non-directive discussion hypothesis for explaining group differences.

(3) Students with a high level of Prior Program Exposure answered significantly fewer attitude items negatively on the pre-test than students with low levels of primary prior exposure at the .001 level of significance. Students in high Prior Program Activity Grades answered significantly fewer attitude items on the pre-test negatively than students in low Prior Program Activity Grades at the .001 level of significance. However, B group students answered significantly more attitude items negatively on the pre-test than A group students did at the .02 level of significance. Although no significant interaction occurred, the results observed for the percent negative responses to the attitude items of the pre-test were identical to those observed for percent positive responses (see Tables XII and XIV). As can be seen from Table XIV, the results were again linear in the A groups but disordinal in the B groups, again supporting explanations (b) and (c) given above. No negative response rate mean above 30%, however, was observed in any of the cells in Table XIV indicating once again that students cannot be said to have predominately negative attitudes or characterized as believers in stereotypes.

Such a characterization of the predominant opinions of any kind of student simply cannot be supported by the data, and it will be seen that this finding is cross-validated in the Rival Curriculum Community. The "minimally exposed" student in the content area is uncertain in terms of knowledge and relatively undecided in terms of opinions. This student has at best a rudimentary or only partially formed cognitive schema which is "plastic" in the cognitive sense of the term. The nature of the alcohol education mission, therefore, in terms of the minimally exposed student is not one of conversion but one of appropriate cognitive schema formation. Given the amount of question-asking and discussion that were induced by simply administering a knowledge and attitude test (see the test, retest reliability studies reported in Chapter V), it would seem that not a great deal really has to be done to begin the schema formation process. The ultimate intervention questions, therefore, are ones of direction and control of the differentiation processes that will occur, it seems, from even minimal stimulations.

From the data presented in Tables VI to XVI, it would seem that one could conclude that CASPAR Alcohol Education most probably increased the positive attitude level of students in Somerville and decreased their levels of stereotyped opinions over the course of the program's first two years. The only question that remains is the question of overall prior program impact during the program's first two years.

Tables XVII, XVIII, and XIX present Somerville students' total percent correct, uncertain, and incorrect scores for all of the items on the pre-test by Groups, Level of Prior Primary Exposure (LPPE), and Prior Program Activity Grades (PPAG). Tables XVIIa, XVIIIa and XIXa present the main effect means for Tables XVII, XVIII, and XIX, and Table XXI presents a summary of all the F-ratio effects observed across each of the response rates. An abbreviated summary of the findings presented in Tables XVII to XXI is presented;

Table XVII

Total Percent Correct Scores on the Pretest by Group Level of Primary Prior Exposure and Prior Program Activity Grades (N=626)

	<u>A Groups</u>				<u>B Groups</u>			
	<u>LPPE: Low</u>		<u>High</u>		<u>Low</u>		<u>High</u>	
	n	$\bar{x}$	n	$\bar{x}$	n	$\bar{x}$	n	$\bar{x}$
Low PPAG	129	53.5	59	67.9	124	51.9	38	64.2
High PPAG	105	62.5	52	76.3	92	64.7	27	74.3

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Group(G)	1	91.35	0.57	>.05
LPPE	1	20828.45	129.17	<.001*
PPAG	1	16471.63	102.17	<.001*
G x LPPE	1	267.40	1.66	>.05
G x PPAG	1	402.60	2.50	<.11
LPPE x PPAG	1	68.58	0.42	>.05
G x LPPE x PPAG	1	34.81	0.22	>.05
Error	618	161.21		

Mult. R = .51

A Group = Best Groups (Upper Limit Estimate of Effects)

B Group = Worst Groups (Lower Limit Estimate of Effects)

LPPE = Level of Prior Primary Exposure to the CASPAR Program (Estimator)

PPAG = Prior Program Activity Grades

Table XVIIa

Main Effects for Total Percent Correct Scores on the Pretest by Group
Level of Prior Primary Exposure and Prior Program Activity Grades (N=626)

<u>Source</u>	<u>N</u>	<u>Unadjusted Mean</u>	<u>Adjusted Mean</u>	<u>F</u>	<u>p</u>
Group A	345	62.17	61.50	.57	>.05
Group B	281	59.90	60.72		
Low LPPE	450	57.47	57.52	129.20	<.001
High LPPE	176	70.56	70.42		
Low PPAG	350	56.53	56.59	102.17	<.001
High PPAG	276	67.01	66.93		

Mult. R = .53

A Group = Best Group (Upper Limit Estimate of Effects)

B Group = Worst Group (Lower Limit Estimate of Effects)

LPPE = Level of Prior Primary Exposure to the CASPAR Program (Estimator)

PPAG = Prior Program Activity Grades

Table XVIII

Total Percent Uncertain Scores on the Pretest by Group Level of
Primary Prior Exposure and Prior Program Activity Grades (N=626)

	<u>A Group</u>				<u>B Group</u>			
	<u>LPPE: Low</u>		<u>High</u>		<u>Low</u>		<u>High</u>	
	n	$\bar{x}$	n	$\bar{x}$	n	$\bar{x}$	n	$\bar{x}$
Low PPAG	129	15.5	59	9.1	124	14.6	38	7.8
High PPAG	105	12.8	52	6.4	92	9.3	27	5.9

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Group(G)	1	447.9	3.56	>.05
LPPE	1	4453.4	35.42	<.001*
PPAG	1	1892.2	15.05	<.001*
G x LPPE	1	35.7	.28	>.05
G x PPAG	1	110.6	.88	>.05
LPPE x PPAG	1	58.5	.47	>.05
G x LPPE x PPAG	1	80.6	.64	>.05
Error	618	125.7		

Mult. R = .28

A Group = Best Groups (Upper Limit Estimate of Effects)

B Group = Worst Groups (Lower Limit Estimate of Effects)

LPPE = Level of Prior Primary Exposure to the CASPAR Program (Estimator)

PPAG = Prior Program Activity Grades

Table XVIIIa

Main Effects for Total Percent Uncertain Scores on the Pretest by Group Level of Prior Primary Exposure and Prior Program Activity Grades (N=626)

<u>Source</u>	<u>N</u>	<u>Unadjusted Mean</u>	<u>Adjusted Mean</u>	<u>F</u>	<u>p</u>
A Groups	345	12.19	12.48	3.56	>.05
B Groups	281	11.13	10.77		
Low LPPE	450	13.34	13.39	35.42	<.001
High LPPE	176	7.53	7.42		
Low PPAG	350	13.25	13.25	15.05	<.001
High PPAG	276	9.75	9.75		

Mult. R = .28

A Groups = Best Groups (Upper Limit Estimate of Effects)

B Groups = Worst Groups (Lower Limit Estimate of Effects)

LPPE = Levels of Prior Exposure to the CASPAR Program (Estimator)

PPAG = Prior Program Activity Grades

Table XIX

Total Percent Incorrect Scores on the Pretest by Group Level of Prior Primary Exposure and Prior Program Activity Grades (N=626)

	<u>A Groups</u>				<u>B Groups</u>			
	<u>LPPE: Low</u>		<u>High</u>		<u>Low</u>		<u>High</u>	
	n	$\bar{x}$	n	$\bar{x}$	n	$\bar{x}$	n	$\bar{x}$
Low PPAG	129	30.9	59	23.0	124	33.5	38	27.9
High PPAG	105	24.7	52	17.3	92	25.9	27	19.8

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Group(G)	1	943.9	7.1	<.008*
LPPE	1	6019.6	45.5	<.001*
PPAG	1	7198.2	54.45	<.001*
G x LPPE	1	107.7	0.81	>.05
G x PPAG	1	91.1	0.69	>.05
LPPE x PPAG	1	0.4	0.0	>.05
G x LPPE x PPAG	1	9.5	0.01	>.05
Error	618	132.2		

Mult. R = .39

A Groups = Best Groups (Upper Limit Estimate of Effects)

A Groups = Worst Groups (Lower Limit Estimate of Effects)

LPPE = Level of Prior Primary Exposure to the CASPAR Program

PPAG = Prior Program Activity Grades

Table XX

Summary of Total Pretest Percentages by Groups, Levels of Primary Exposure and Prior Program Activity Grades (N=626)

		<u>A Groups</u>		
<u>Combinations</u>	<u>n</u>	<u>Percent Correct</u>	<u>Percent Uncertain</u>	<u>Percent Incorrect</u>
Low LPPE - Low PPAG	129	53.5	15.5	30.9
Low LPPE - High PPAG	105	62.5	12.8	24.7
High LPPE - Low PPAG	59	67.9	9.1	23.0
High LPPE - High PPAG	52	76.3	6.4	17.3

		<u>B Groups</u>		
Low LPPE - Low PPAG	124	51.9	14.6	33.5
Low LPPE - High PPAG	92	64.7	9.3	25.9
High LPPE - Low PPAG	38	64.7	7.8	27.9
High LPPE - High PPAG	27	74.3	5.9	19.8

A Groups = Best Groups (Upper Limit Estimate of Effects)

B Groups = Worst Groups (Lower Limit Estimate of Effects)

LPPE = Level of Prior Primary Exposure to the CASPAR Program

PPAG = Prior Program Activity Grades

Table XXI

Summary of F-Ratios for Total Pretest Percentages by Groups, Levels of Primary Prior Exposure, and Prior Program Activity Grades (N=626)

<u>Source</u>	<u>df</u>	<u>Percent Correct</u>	<u>Percent Uncertain</u>	<u>Percent Incorrect</u>
Group(G)	1	0.6	3.56	17.1*
LPPE	1	129.2*	35.4*	45.5*
PPAG	1	102.2*	15.1*	54.5*
G x LPPE	1	1.7	0.3	0.8
G x PPAG	1	2.5	0.9	0.7
LPPE x PPAG	1	0.4	0.5	0.0
G x LPPE x PPAG	1	0.2	0.6	0.0
Error	618			

* = $p < .05$

Groups = Best Groups (A) and Worst Groups (B)

LPPE = Level of Primary Prior Exposure to the CASPAR Program

PPAG = Prior Program Activity Grades

Table XXII

Summary of Pretest Multiple Regression Coefficients in Somerville

<u>Variable</u>	<u>n</u>	<u>Percent Correct</u>	<u>Percent Uncertain</u>	<u>Percent Incorrect</u>
Knowledge items	626	.51	.25	.39
Attitude items	626	.35	.22	.26
All items	626	.51	.28	.39

Table XXIII

List of Table Acronyms

TI = Type of Intervention; namely, degree to which the CASPAR curriculum was implemented in classroom by teacher.

PICC = Proper Implementation of CASPAR Curriculum in Classroom

IICC = Improper Implementation of CASPAR Curriculum in Classroom

RVCR = Rival Comparison Curriculum

CLPPE = Combined Level of Prior Primary Exposure

A GROUP = Upper Limit Estimator of Effects

B Group = Lower Limit Estimator of Effects

(1) As can be seen from Table XVII, Somerville students with a high level of prior primary exposure answered significantly more knowledge and attitude items correctly on the pretest than students with lower levels of exposure at the .001 level of significance. Exposure effects were roughly linear across levels of PPAG and group, and the combined effects of all of these factors was relatively strong, as indicated by a multiple regression coefficient of $r=+.51$ which is a remarkably high predictive correlation coefficient for three dichotomous categorical variables.

(2) As can be seen from Table XVIII, Somerville students with a high level of prior primary exposure answered significantly fewer knowledge and attitude items uncertain on the pretest than students with lower levels of exposure at the .001 level of significance. Exposure effects were roughly linear across levels of PPAG and group, attesting once again to the overall validity of the data obtained and several of the arguments made earlier.

(3) As can be seen from Table XIX, Somerville students with a high level of prior primary exposure answered significantly fewer knowledge and attitude questions incorrectly on the pretest than students with lower levels of exposure at the .001 level of significance. Exposure effects, however, were not proportionately linear across levels of PPAG and group, and an overall group difference was observed at the .008 level of significance. Although B group students in general tended to have higher total incorrect response rates than A group students, the overall effect observed in Table XIX is most probably some type of threshold effect; namely, some minimal level of exposure needs to be experienced before incorrect response rates begin to be affected. Overall incorrect response rates, therefore, would not seem to be linearly related in some simple fashion to number of sessions experienced.

From the data presented in Tables XVII to XXII, it would seem that one could conclude that the CASPAR Alcohol Education Program had a relatively strong effect on those students who were most exposed to the program in the prior year (28% of the sample). The overall effect of the program was less strong for students who had only a moderate amount of exposure in the prior year (31% of the sample), and for B group students as opposed to A group students (45% of the sample), if total percent incorrect response rate is used as the evaluation criterion. The CASPAR Alcohol Education Program, therefore, may be said to have made a significant impact on roughly 30% of Somerville students in grades seven to twelve in the prior year.¹

¹The figure of 30% was arrived at by using the number of students presently in grades seven through twelve in Somerville and then proportionately multiplying percentages exposed at each grade level (see Chapter IV) by percentages affected (levels of LPPE and PPAG).

Pretest Levels by Type of Curriculum Intervention

In this section of this chapter, the entering pretest levels of students will be described by type of curriculum intervention received and level of prior exposure. This section, therefore, is preparation for reading the next chapter on the nature of pre to post test changes by type of curriculum intervention and amount of prior exposure. The reader should note that the LPPE and PPAG variables used in the last section of this chapter to report results will be combined into one variable in this section called CLPPE by the procedures described in detail in the first section of this chapter. CLPPE is only a linear reaggregation of LPPE and PPAG for the purposes of examining effects across types of curriculum intervention (namely, PICC, IICC and RVCR). The reader should also note that only main effects tables will be given in this section along with summaries and interpretations. The actual cell means for each table presented is given in Appendix V.

Tables XXIV, XXV, and XXVI present all students' percent correct, uncertain, and incorrect scores for the knowledge items on the pretest by Groups, Type of Curriculum Intervention Received, and Combined Levels of Prior Primary Exposure. Table XXVII presents the results for the three response rates for the knowledge items scaled as one score by the procedures outlined in Chapter IV. Table XXVIII presents a summary of the main effects means given in Tables XXIV to XXVIII and Table XXIX presents a summary of each of the now four response rates. A summary of the findings presented in Tables XXIV to XXIX is given below:

(1) As can be seen from Table XXIV, two strong interactions were observed in terms of percent correct knowledge scores on the pretest between G and TI and TI and CLPPE. The first interaction ($G \times TI$) is due to:

(a) the Rival Curriculum's B groups having lower percent correct scores for the knowledge items than all other group combinations. This outcome, however, is due to the RVCR's B groups having significantly higher uncertain response rates than all other group combinations in the design (see Appendix V);

(b) the Rival Curriculum's A and B groups having lower percent correct scores for the knowledge items in the moderate and high categories of CLPPE than the Somerville A and B group students; and,

(c) the Somerville B groups in the IICC intervention condition having slightly higher percent correct knowledge scores on the pretest than the Somerville B groups in the PICC intervention conditions.

The second interaction ($TI \times CLPPE$) is due to:

(a) the Rival Curriculum groups not linearly fitting the historical model of the CASPAR Alcohol Education Program in the low and moderate categories of the CLPPE variable; and

TABLE XXIV

Main Effects for Percent Correct Knowledge Scores on the Pretest by Group, Type Intervention, and Combined Level of Prior Primary Exposure (N=881)

	<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GROUP: A	482	53.44	52.61	
B	399	50.04	51.04	
				0.08
TI: PICC	434	51.91	55.81	
IICC	192	58.20	57.60	
RVCR	255	47.13	40.96	
				0.19
CLPPE: minimal	275	42.41	39.53	
low	261	53.37	52.42	
moderate	155	53.38	54.73	
high	190	62.41	66.79	
				0.36
<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Group(G)	1	527.25	1.71	.188
TI	2	18228.32	59.20	.001
CLPPE	3	22812.06	74.09	.001
G x TI	2	1887.27	6.13	.002
G x CLPPE	3	97.83	0.32	.999
TI x CLPPE	6	1025.97	3.33	.003
G x TI x CLPPE	6	274.73	0.99	.999
ERROR	857	307.93		
Mult. R.	.48			

TABLE XXV

Main Effects for Percent Uncertain Scores on the
Pretest by Group, Type of Intervention, and
Combined Level of Prior Primary Exposure (N=881)

		<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GROUP:	A	482	16.75	17.20	0.01
	B	399	17.19	16.65	
TI:	PICC	434	14.76	12.99	0.22
	IICC	192	14.09	14.10	
	RVCR	255	22.83	25.84	
CLPPE:	minimal	275	19.45	22.27	0.15
	low	261	17.04	17.41	
	moderate	155	17.66	16.63	
	high	190	12.63	8.88	
<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>	
Group(G)	1	63.82	0.26	.999	
TI	2	11763.30	47.47	.001	
CLPPE	3	5460.45	22.04	.001	
G x TI	2	1429.87	5.77	.003	
G x CLPPE	3	367.35	1.48	.216	
TI x CLPPE	6	445.37	1.80	.096	
G x TI x CLPPE	6	105.31	0.43	.999	
ERROR	857	247.80			
Mult. R.	.34				

TABLE XXVI

Main Effects for Percent Incorrect Knowledge
Scores on the Pretest by Group, Type of
Intervention, and Combined Levels of Prior
Primary Exposure (N=881)

		<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GROUP:	A	482	29.81	30.20	0.09
	B	399	32.77	32.20	
TI:	PICC	434	33.32	31.21	0.14
	IICC	192	27.71	28.31	
	RVCR	255	30.04	33.19	
CLPPE:	minimal	275	38.14	38.21	0.31
	low	261	29.59	30.17	
	moderate	155	28.96	28.64	
	high	190	24.96	24.33	
					-----0.31
<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>	
Group(G)	1	957.98	4.24	.038	
TI	2	1176.12	5.20	.006	
CLPPE	3	6329.15	27.98	.001	
G x TI	2	1293.64	5.72	.004	
G x CLPPE	3	346.23	1.53	.203	
TI x CLPPE	6	783.44	3.46	.002	
G x TI x CLPPE	6	429.77	1.90	.077	
ERROR	857	226.21			
Mult. R.	.33				

TABLE XXVII

Main Effects for Percent Scaled Knowledge
Scores on the Pretest by Group, Type of
Intervention, and Combined Level of Prior
Primary Exposure (N=881)

		<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GROUP:	A	482	61.82	61.21	0.10
	B	399	58.64	59.38	
TI:	PICC	434	59.30	62.31	0.16
	IICC	192	62.25	64.65	
	RVCR	255	58.55	53.89	
CLPPE:	minimal	275	52.14	50.66	0.38
	low	261	61.89	61.13	
	moderate	155	62.22	63.05	
	high	190	68.73	71.23	
<u>Source</u>		<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Group(G)		1	726.66	64.39	.001
TI		2	6761.40	32.97	.001
CLPPE		3	13205.52	3.54	.057
G x TI		2	1232.98	6.01	.003
G x CLPPE		3	130.20	.64	.999
TI x CLPPE		6	793.37	3.87	.001
G x TI x CLPPE		6	325.93	1.59	.146
ERROR		857	205.10		
Mult. R.	.45				

Table XXVIII

Summary of Main Effect Means for the Knowledge Items on the Pretest by Group, Type of Intervention and Combined Level of Prior Primary Exposure (N=88)

<u>Group</u>	<u>n</u>	<u>Percent Correct</u>	<u>Percent Uncertain</u>	<u>Percent Incorrect</u>	<u>Scaled Percent</u>
A	482	53.4	16.7	29.8	61.8
B	399	50.1	17.2	32.8	58.6
<u>TI</u>					
PICC	434	51.9	14.8	33.3	59.3
IICC	192	58.2	14.1	27.7	62.3
RVCR	255	47.1	22.8	30.0	58.5
<u>CLPPE</u>					
Minimal	275	42.4	19.5	38.2	50.7
Low	261	53.4	17.0	30.2	61.1
Moderate	155	53.4	17.7	28.6	63.0
High	190	62.4	12.6	24.3	71.2

Table XXIX

Summary of F-Ratios for the Knowledge Items on the Pretest by Group,
Type of Intervention, and Combined Level of Prior Primary Exposure
(N=881)

<u>Source</u>	<u>df</u>	<u>Percent Correct</u>	<u>Percent Uncertain</u>	<u>Percent Incorrect</u>	<u>Scaled Percent</u>
Group(G)	1	1.7	0.3	4.2*	64.4*
TI	2	59.2*	47.5*	5.2*	33.0
CLPPE	3	74.1*	22.1*	28.0*	1 3.5
G x TI	2	6.1*	5.8*	5.7*	6.0*
G x CLPPE	3	0.3	1.5	1.5	0.6
TI x CLPPE	6	3.3*	1.8	3.5*	3.9*
G x TI x CLPPE	6	0.9	0.4	1.9	1.6
Error	857				

* = $p < .05$

(b) the IICC intervention condition in Somerville having slightly higher correct knowledge scores on the pretest in the low and moderate categories of CLPPE for both A and B groups.

The interactions observed in Table XXIV in terms of percent correct scores for the knowledge items on the pretest, therefore, are primary due to:

(a) the Rival Curriculum groups not linearly fitting the CASPAR historical model in the low and moderate categories of the CLPPE variable;

(b) the Rival Curriculum's B groups (and it will be seen in its A groups also to a lesser degree) being much more uncertain about the knowledge items of the pretest than all other group combinations in the design; and

(c) the IICC intervention condition in Somerville having significantly higher percent correct knowledge scores on the pretest than both of the other intervention conditions.

The overall effects of the points summarized above may be more precisely understood by examining how the main effects means were adjusted in Table XXIV for the inequalities present on the Groups, TI, and CLPPE factors.

(2) As can be seen from Table XXV, two interactions were observed in terms of percent uncertain knowledge scores on the pretest between G and TI and TI and CLPPE. The nature of these two interactions are the same as the interactions that were observed for percent correct scores on the pretest as can be easily ascertained by examining how the main effects means in Table XXV were adjusted exactly as they were in Table XXIV. The Rival Curriculum students were much more uncertain about the knowledge items of the pretest than were Somerville students in either intervention mode. The degree of uncertainty about the knowledge items on the pretest, however, was as much a function of amount of prior exposure in both communities as any other factor. As can be seen from Table XXV, minimal CLPPE uncertain response levels were adjusted upward and high CLPPE uncertain response means were adjusted downward to a highly significant degree. In terms of minimally exposed students the three categorical levels of TI are roughly equivalent in terms of percent uncertain responses to the knowledge items on the pretest.

(3) As can be seen from Table XXVI two strong two-way interactions were observed in terms of percent incorrect knowledge scores on the pretest between G and TI and TI and CLPPE and a close to significant three-way interaction between G, TI and CLPPE. In terms of the two way interactions, the results presented in Table XXVI are the same as those presented in Tables XXIV and XXV. The tendency toward three-way interaction, however, means that the B group effect is more pronounced. In the Rival Curriculum community, B group students had approximately

the same mean levels of incorrect response rates on the knowledge items on the pretest regardless of levels of CLPPE (roughly 33%). In Somerville, however, minimally exposed students in the PICC intervention condition had significantly higher incorrect response rates on the pretest knowledge items in both the A and the B groups than in the IICC or RVCR intervention conditions (roughly 39%). In terms of incorrect response rates on the knowledge items on the pretest, the IICC intervention condition has the lowest pretest incorrect response rate means across levels of CLPPE of the three intervention conditions as a generalization, but across levels of CLPPE for B groups in particular.

(4) In terms of coming to an overall conclusion about the nature of pretest knowledge response rate profile, the reader will find the scaled score results presented in Table XXVII quite helpful as well as the summaries of main effect means and F-ratio given in Tables XXVIII and XXIX. As can be seen from Table XXVII, minimal CLPPE students are essentially undecided in terms of the pretest knowledge items and the same is true of students in the RVCR intervention condition in general (see Chapter IV for scaled score details). The IICC intervention condition has a more positive overall profile on the pretest knowledge items than the PICC or RVCR intervention conditions and the PICC intervention condition is similar to the RVCR intervention condition except that the PICC intervention condition is essentially positive whereas the RVCR intervention condition is undecided. In terms of Groups, A groups believe in fewer myths and are less ambivalent than B groups and this profile is particularly true for the IICC and PICC intervention conditions.

Given the data that are presented in Tables XXIV to XXIX, it would seem reasonable to conclude that the IICC intervention condition has the better pretest knowledge profile in terms of both groups and levels of CLPPE than the PICC or RVCR intervention conditions.

Tables XXX, XXXI and XXXII present all students' percent correct (positive), uncertain (undecided), and incorrect (negative) attitude scores on the pretest by Groups, Type of Curriculum Intervention Received and Combined Level of Prior Primary Exposure. Table XXXIII presents the results for the three response rates for the attitude items scaled as one score by the procedures outlined in Chapter IV. Table XXXIV presents a summary of the main effects means given in Tables XXX to XXXIV and Table XXXV presents a summary of the F-ratios for each of the now four response rates. A summary of Tables XXX to XXXIII is given below. This summary, however, will focus primarily on Table XXXIII as this table presents the clearest depiction of the findings:

(1) All students regardless of Group, Type of Intervention, or Combined Level of Prior Primary Exposure have essentially positive attitudes on the pretest. All students, moreover, have relatively low stereotyped opinion scores (percent incorrect or negative scores).

(2) Overall, B group students have lower percent correct (positive) and higher percent incorrect (negative) attitude scores on the pretest than A group students, regardless of type of intervention condition.

TABLE XXX

Main Effects for Percent Positive Attitude Scores
on the Pretest by Group, Type of Intervention, and
Combined Level of Primary Prior Exposure (N=881)

	<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GROUP: A	482	70.22	69.83	
B	399	65.78	66.26	.13
TI: PICC	434	65.81	67.85	
IICC	192	70.96	70.53	
RVCR	255	70.23	67.08	.14
CLPPE: minimal	275	61.36	61.58	
low	261	69.17	68.75	
moderate	155	69.84	69.99	
high	190	75.47	75.60	.29
<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Group(G)	1	2749.15	10.14	.002
TI	2	641.12	2.36	.092
CLPPE	3	6131.14	22.60	.001
G x TI	2	26.24	.10	.999
G x CLPPE	3	526.99	1.94	.119
TI x CLPPE	6	1097.24	4.05	.001
G x TI x CLPPE	6	975.32	3.60	.002
ERROR	857	271.24		
Mult. R.	.32			

TABLE XXXI

Main Effects for Percent Uncertain Attitude Scores
on the Pretest by Group, Type of Intervention, and
Combined Level of Prior Primary Exposure (N=881)

		<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GROUP:	A	482	8.90	9.13	
	B	399	8.48	8.21	0.02
TI:	PICC	434	10.11	9.16	
	IICC	192	6.79	6.70	
	RVCR	255	7.77	9.46	0.11
CLPPE:	minimal	275	11.94	11.81	
	low	261	8.69	9.22	
	moderate	155	7.57	7.33	
	high	190	4.99	4.66	0.20
<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>	
Group(G)	1	181.39	1.23	.267	
TI	2	458.02	3.10	.044	
CLPPE	3	1649.17	11.16	.001	
G x TI	2	218.82	1.48	.226	
G x CLPPE	3	127.32	.86	.999	
TI x CLPPE	6	201.31	1.36	.226	
G x TI x CLPPE	6	147.69	1.00	.999	
ERROR	857	147.76			
Mult. R.	.22				

TABLE XXXII

Main Effects for Percent Negative Attitude Scores
on the Pretest by Group, Type of Intervention, and
Level of Prior Primary Exposure (N=881)

	<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GROUP: A	482	20.50	20.67	
B	399	25.34	25.14	0.16
TI: PICC	434	23.38	22.33	
IICC	192	22.04	22.52	
RVCR	255	22.00	23.44	0.04
CLPPE: minimal	275	26.05	26.13	
low	261	21.92	21.76	
moderate	155	22.13	22.20	
high	190	19.35	19.40	0.16

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Group(G)	1	4305.20	19.47	.001
TI	2	83.50	.38	.999
CLPPE	3	1481.83	6.70	.001
G x TI	2	194.29	.88	.999
G x CLPPE	3	302.56	1.37	.250
TI x CLPPE	6	532.05	2.41	.026
G x TI x CLPPE	6	1011.89	4.58	.001
ERROR	857	221.14		
Mult. R.	.22			

TABLE XXXIII

Main Effects for Percent Scaled Attitude Scores
on the Pretest by Group, Type of Intervention,
and Level of Prior Primary Exposure (N=881)

	<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GROUP: A	482	74.67	74.40	
B	399	70.03	70.36	0.15
TI: PICC	434	70.87	72.43	
IICC	192	74.36	73.88	
RVCR	255	74.12	71.82	0.11
CLPPE: minimal	275	67.33	67.49	
low	261	73.52	73.37	
moderate	155	73.63	73.66	
high	190	77.97	77.94	0.25
<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Group(G)	1	3500.64	16.73	.001
TI	2	218.59	1.05	.353
CLPPE	3	3432.24	16.40	.001
G x TI	2	59.91	.29	.999
G x CLPPE	3	384.83	1.84	.137
TI x CLPPE	6	749.18	3.58	.002
G x TI x CLPPE	6	947.59	4.53	.001
ERROR	857	209.25		
Mult. R.	.22			

Table XXXIV

Summary of Main Effect Means for the Attitude Items on the Pretest
by Group, Type of Intervention, and Combined Level of Prior Primary
Exposure (N=881)

<u>Group</u>	<u>n</u>	<u>Percent Correct (Positive)</u>	<u>Percent Uncertain (Undecided)</u>	<u>Percent Incorrect (Negative)</u>	<u>Scaled Percent</u>
A	482	70.2	8.9	20.5	74.7
B	399	65.8	8.5	25.3	70.0
<u>TI</u>					
PICC	434	65.8	10.1	22.3	70.9
IICC	192	71.0	6.8	22.5	74.4
RVCR	255	70.2	7.8	23.4	74.1
<u>CLPPE</u>					
Minimal	275	61.4	11.9	26.1	67.3
Low	261	69.2	8.7	21.7	73.5
Moderate	155	69.8	7.6	22.0	73.6
High	190	75.5	4.5	19.4	78.0

Table XXXV

Summary of F-Ratios for the Attitude Items on the Pretest by Groups,
Type of Intervention and Combined Levels of Prior Primary Exposure
(N=881)

<u>Source</u>	<u>df</u>	<u>Percent Correct (Positive)</u>	<u>Percent Uncertain (Undecided)</u>	<u>Percent Incorrect (Negative)</u>	<u>Scaled Percent</u>
Group(G)	1	10.1*	1.2	19.5*	16.7*
TI	2	2.4	3.1*	0.4	1.0
CLPPE	3	22.6*	11.2*	6.7	16.4*
G x TI	2	0.1	1.5	0.9	0.3
G x CLPPE	3	1.9	0.9	1.4	1.8
TI x CLPPE	6	4.1*	1.4	2.4*	3.6*
G x TI x CLPPE	6	3.6*	1.0	4.6	4.5*
Error	857				

* = $p < .05$

This B group tendency, however, is more pronounced in Somerville (PICC and IICC) students than in the RVCR students, the latter B group having a tendency more toward the undecided position in the relative sense of the term.

(3) Students with a minimal level of primary exposure are less positive, more undecided and have slightly higher negative attitude response rate scores than students with low, moderate and high levels of prior primary exposure across the three types of intervention conditions; and

(4) The overall attitude response rate profiles for the IICC and RVCR intervention conditions are essentially the same except for a slight inordinal inversion in the low and moderate CLPPE for the RVCR mode of intervention due to its lack of fitting the historical CASPAR model, with students in the PICC intervention condition having significantly less positive and more undecided attitude response rates than students in the IICC or RVCR intervention conditions.

In summary, then, it would seem reasonable to conclude that what most distinguishes students attitudinally on the pretest is group membership and Combined Level of Prior Primary Exposure. B group students and students with minimal levels of prior primary exposure have significantly less positive pretest scores relatively than other students. In terms of intervention conditions, students in the IICC and RVCR intervention conditions have significantly more positive and less undecided pretest attitudes than students in the PICC intervention condition. Overall, then in terms of both knowledge and attitude items, the assignment of students to type of intervention conditions would have to be said to favor the IICC intervention condition. If regression effects or number of instructional sessions experienced alone were the primary factor producing pre to post test changes, then the IICC intervention condition should show the least amount of change in terms of the three intervention conditions. However, if something more than regression or the number of instructional sessions experienced are the primary factors in producing pre to post changes (namely, the quality of the intervention experience), then there should be no discriminable pre to post test differences between the IICC and RVCR intervention conditions. This is to say, the pre to post test gains occurring in the PICC intervention condition should be greater than the pre to post test gains in the IICC or RVCR intervention conditions, with no differences being observed between the IICC and RVCR intervention conditions, if quality of experience factors are the primary agents in mediating pre to post-test outcomes.

CHAPTER VII

STUDENT PRE TO POST TEST KNOWLEDGE AND ATTITUDE FINDINGS: DIRECT EVIDENCE OF PROGRAM IMPACT¹

The purpose of this chapter is to present the nature of the knowledge and attitude changes that occurred in students due to type of curriculum intervention received (see Chapters IV and VI for details). As previously stated, the three types of curriculum intervention conditions examined were:

- (1) Proper Implementation of the CASPAR Curriculum (PICC);
- (2) Improper Implementation of the CASPAR Curriculum (IICC); and,
- (3) A Rival Alcohol Awareness Education Curriculum implemented in another community (RVCR).

The analyses presented in this chapter are pre-to-post test gain score differences in terms of type of curriculum intervention and other design factors which were outlined in Chapters IV and VI (see Table A - Abbreviation Codes). The results of these gain score analyses were cross-validated in selective instances through use of repeated measures ANOVAS (see Appendix 2 - Technical Assistance Report Number 1). However, as Richards (1975) has demonstrated through simulation procedures, there are no substantial differences between the various statistical methods available for assessing change. Pre-to-post test difference scores were utilized in conducting analyses, therefore, as they most clearly convey the nature of the different effects obtained by the three types of curriculum intervention conditions examined.

Main effect means only, moreover, will be presented in this chapter as they are the clearest expression of the type of intervention effects that were observed. Detailed cell means are given in Appendix V.

Tables I, II and III present all students' percent correct, uncertain and incorrect change scores for the knowledge items on the CASPAR Alcohol Education Test by Groups, Type of Curriculum Intervention Received (TI), and Combined Level of Prior Primary Exposure (CLPPE). Table IV presents the results for the three response rate changes for the knowledge items scaled as one score by the procedures outlined in Chapter IV. Table V presents a summary of the main effects means given in Tables I to IV, and Table VI presents a summary of each of the four response rates examined. A summary of the findings presented in Tables I to VI is given below:

¹Again version VIII of the SPSS analysis of variance package was used to carry out the analyses reported in this chapter.

Table A

Abbreviation Codes

TI	=	Type of Intervention; namely degree to which the CASPAR curriculum was implemented in classroom by teacher.
PICC	=	Proper Implementation of CASPAR Curriculum in Classroom
IICC	=	Improper Implementation of CASPAR Curriculum in Classroom
RVCR	=	Rival Comparison Curriculum
CLPPE	=	Combined Level of Prior Primary Exposure: minimal, low, moderate, and high
A GROUPS	=	Upper Limit Estimator of Effects
B GROUPS	=	Lower Limit Estimator of Effects

(1) As can be seen from Table I, a strong interaction was observed in terms of percent correct knowledge change scores between levels of TI and CLPPE. This interaction was due to:

(a) The IICC intervention condition in Somerville having its greatest gains in the low category of CLPPE, and its smallest gains in the moderate category of CLPPE; and

(b) The Rival Curriculum gaining more in the moderate than in the low category of CLPPE.

The TI by CLPPE interaction observed in Table I, therefore, is actually due to the TI by CLPPE interaction that was originally present in the pretest data due to the RVCR curriculum groups not fitting the historical CASPAR Model (see Chapter VI for details). The most appropriate interpretation of Table I, consequently, is that the PICC intervention condition achieved greater knowledge gains than the IICC or RVCR intervention conditions with the gains in the latter two intervention conditions being the same. Across the three intervention conditions students with minimal prior exposure gain the most, and A group students had higher knowledge gains than B group students. In terms of percent correct knowledge score changes, then, the PICC intervention condition was superior.

(2) As can be seen from Table II, two interactions were observed in terms of percent uncertain knowledge score changes. The stronger of these two interactions (TI x CLPPE) is the same interaction that was observed in Table I and it is explained in exactly the same way; namely due to the RVCR groups not linearly fitting the CASPAR historical model. The second interaction observed (G x TI) is due to the PICC intervention conditions B group mean being significantly lower than its A group mean, while the other TI categories have approximately the same mean change score for both groups. This interaction also parallels the G x TI interaction found on the pretest (see Chapter VI for details). The most appropriate interpretation of Table II, therefore, would be that the RVCR intervention condition produced the greatest reduction in uncertainty responses with reductions being greater in A groups than in B groups and greatest for minimal CLPPE students.

(3) As can be seen from Table III, a marginal TI x CLPPE interaction was observed in terms of percent incorrect knowledge score changes. This interaction is again due to the RVCR groups not initially fitting the CASPAR historical model. The most appropriate interpretation of Table III, therefore, would be that the PICC intervention conditions more significantly reduced incorrect knowledge responses than the IICC intervention condition, but the RVCR intervention condition did not significantly reduce incorrect knowledge responses at all. The reductions of incorrect knowledge responses, moreover, was linear across levels of CLPPE.

In terms of coming to an overall conclusion about the nature of the changes in knowledge response rate profiles, the reader will find the scaled score results presented in Table IV quite helpful as well as the summaries of main effect means and F-ratios given in Tables V and VI. As can be seen from Table IV:

(a) minimal CLPPE students gain most while high CLPPE students gain least;

(b) moderate and high CLPPE gains are attributable more to loss of uncertain responses than change from negative responses, while the opposite tendency exists for minimal and low CLPPE students;

(c) A groups gained more than B groups by clarifying initial uncertain responses;

(d) despite strong pretest differences, the IICC and RVCR intervention conditions show similar gains, both being less than PICC intervention conditions; and,

(e) whereas the RVCR gains are almost exclusively attributable to clarification of uncertain response rates, the IICC gains come equally from diminution in uncertain and incorrect response rates. PICC gains, however, come more from conversions of incorrect response rates than from reduction of uncertain response rates.

Table I

Main Effects for Percent Correct Knowledge Score Changes by Group, Type of Intervention, and Combined Level of Prior Primary Exposure (N=881)

	<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GROUP: A	482	19.68	20.12	
B	399	17.32	16.79	0.06
TI: PICC	434	23.22	21.07	
IICC	192	14.49	14.57	
RVCR	255	13.87	17.47	0.22
CLPPE: minimal	275	26.86	25.62	
low	261	17.72	18.96	
moderate	155	15.99	15.69	
high	190	10.02	10.36	0.31

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Group(G)	1	2394.16	6.61	.01
TI	2	2585.89	7.13	.001
CLPPE	3	7448.84	20.55	.001
G x TI	2	344.92	.95	.999
G x CLPPE	3	105.54	.29	.999
TI x CLPPE	6	1725.09	4.76	.001
G x TI x CLPPE	6	95.58	.26	.999
ERROR	857	362.49		
Mult. R. = .34				

Table II

Main Effects for Percent Uncertain Knowledge Score Changes by Group,
Type of Intervention, and Combined Level of Prior Primary Exposure
(N=881)

	<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GROUP: A	482	-10.78	-11.05	
B	399	-8.41	-8.09	0.07
TI: PICC	434	-8.33	-7.20	
IICC	192	-6.81	-6.93	
RVCR	255	-14.23	-16.07	0.18
CLPPE: minimal	275	-11.13	-13.07	
low	261	-9.10	-9.66	
moderate	155	-10.54	-9.67	
high	190	-7.81	-4.95	0.08

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Group(G)	1	1890.18	7.86	.005*
TI	2	6046.79	25.13	.001*
CLPPE	3	1994.30	8.29	.001*
G x TI	2	863.52	3.59	.027*
G x CLPPE	3	324.68	1.35	.256
TI x CLPPE	6	746.78	3.10	.005*
G x TI x CLPPE	6	375.71	1.56	.154
ERROR	857	240.64		
Mult. R. = .26				

Table III

Main Effects for Percent Incorrect Knowledge Score Changes by Group,
Type of Intervention, and Combined Level of Prior Primary Exposure
(N=881)

	<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GROUP: A	482	-8.54	-8.72	
B	399	-8.56	-8.35	0.00
TI: PICC	434	-14.53	-13.51	
IICC	192	-7.32	-7.29	
RVCR	255	.71	-1.05	0.36
CLPPE: minimal	275	-15.39	-12.20	
low	261	-8.26	-8.95	
moderate	155	-5.11	-5.68	
high	190	-1.56	-5.06	0.28
<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Group(G)	1	29.75	0.11	.999
TI	2	10161.22	36.08	.001*
CLPPE	3	1999.70	7.10	.001*
G x TI	2	124.86	.44	.999
G x CLPPE	3	77.61	.28	.999
TI x CLPPE	6	493.20	1.75	.105
G x TI x CLPPE	6	405.41	1.44	.195
ERROR	857	281.62		
Mult. R. = .39				

Table IV

Main Effects for Percent Scaled Knowledge Score Changes by Group, Type of Intervention, and Combined Level of Prior Primary Exposure (N=881)

	<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GROUP: A	482	13.94	14.25	
B	399	12.77	12.40	0.03
TI: PICC	434	18.70	17.12	
IICC	192	10.74	10.76	
RVCR	255	6.41	9.09	0.31
CLPPE: minimal	275	20.95	18.74	
low	261	12.82	13.78	
moderate	155	10.38	10.52	
high	190	5.77	7.54	0.32

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Group(G)	1	739.40	2.82	.089
TI	2	4861.86	18.56	.001*
CLPPE	3	4225.69	16.14	.001*
G x TI	2	19.01	.07	.999
G x CLPPE	3	10.41	.04	.999
TI x CLPPE	6	922.45	3.52	.002*
G x TI x CLPPE	6	156.57	.60	.999
ERROR	857	261.89		
Mult. R. = .39				

Table V

Summary of Main Effect Means for Knowledge Score Changes by Group,
Type of Intervention and Combined Level of Prior Program Exposure
(N=881)

<u>Group</u>	<u>n</u>	<u>Correct</u>	<u>Uncertain</u>	<u>Incorrect</u>	<u>Scaled Score</u>
A	482	19.7	-10.8	-8.5	13.94
B	399	17.3	-8.4	-8.6	12.77
<u>TI</u>					
PICC	434	23.2	-8.3	-14.5	18.70
IICC	192	14.5	-6.8	-7.3	10.74
RVCR	255	13.9	-14.2	-0.7	6.41
<u>CLPPE</u>					
minimal	275	26.9	-11.1	-15.4	20.95
low	261	17.7	-9.1	-8.3	12.82
moderate	155	16.0	-10.5	-5.1	10.38
high	190	10.0	-7.8	-1.6	5.77

TI= Type of Intervention; namely the degree to which the CASPAR Curriculum was implemented in the classroom by teacher

PICC = Proper Implementation of CASPAR Curriculum in Classroom

IICC = Improper Implementation of CASPAR Curriculum in Classroom

RVCR = Rival Comparison Curriculum

CLPPE = Combined Level of Prior Primary Exposure

GROUP A = Upper Limit Estimator

GROUP B = Lower Limit Estimator

Table VI

Summary of F-Ratios for Knowledge Score Changes by Group, Type of Intervention, and Combined Level of Prior Primary Exposure (N=881)

<u>Source</u>	<u>df</u>	<u>Correct</u>	<u>Uncertain</u>	<u>Incorrect</u>	<u>Scaled Score</u>
Group (G)	1	6.6*	7.9*	0.1	2.8*
TI	2	7.1*	25.1*	36.1*	18.6*
CLPPE	3	20.6*	8.3*	7.1	16.1*
G x TI	2	1.0	3.6*	0.4	0.1
G x CLLPE	3	0.3	1.4	0.3	0.0
TI x CLPPE	6	4.8*	3.1*	1.8	3.5*
G x TI x CLPPE	6	0.3	1.6	1.4	0.6
ERROR	857				

TI = Type of Intervention; namely the degree to which the CASPAR Curriculum was implemented in the classroom by teacher

PICC = Proper Implementation of CASPAR Curriculum in Classroom

IICC = Improper Implementation of CASPAR Curriculum in Classroom

RVCR = Rival Comparison Curriculum

CLPPE = Combined Level of Prior Primary Exposure

GROUP A = Upper Limit Estimator

GROUP B = Lower Limit Estimator

Given the data that has been presented, it would seem warranted to conclude that both the IICC and PICC intervention conditions were superior to the RVCR intervention condition in terms of changing knowledge response rate profiles. The PICC intervention condition, however, was superior to the IICC intervention condition with the IICC condition being more like the RVCR condition than the PICC intervention condition. The PICC intervention condition's superiority in terms of changes in knowledge response rate profiles, therefore, must be due to something more than just simply the number of instructional sessions received.

Tables VII, VIII and IX present all students' percent correct (positive), uncertain (undecided), and incorrect (negative) attitude change scores from pre-to-post test by Group, Type of Curriculum Intervention Received, and Combined Level of Prior Primary Exposure. Table X presents the results for the three response rates for the attitude items scaled as one score by the procedures outlined in Chapter IV. Table XI presents a summary of the main effects means given in Tables VII to X and Table XII presents a summary of the F-ratios for each of the four response rates. A summary of Tables VII to X is given below:

(1) Overall, there was a significant pre-to-post test gain in positive attitude scores, but the gain was highly differentiated in terms of change rates, prior exposure categories and type of intervention.

(2) Both A groups and B groups made equal positive gains, but for B group students the gain is mostly attributable to a change away from negative responses, whereas gains for A group students came equally from uncertain and negative response rates.

(3) The effect of the parallel change rates observed for groups is to maintain the initial disparity in positive attitude scores that was observed in favor of Group A students.

(4) The greatest gains in positive attitude scores were observed in the minimal and the moderate categories of CLPPE. Those students with the least amount of prior exposure to alcohol education gained most, and their students showed the greatest losses in both uncertain and negative response rates. The overall effect of the differential gain rates observed under levels of CLPPE was to produce a final-state superiority of upper two categories of CLPPE over the lower two.

(5) Gains in positive attitude scores were not distributed equally across Types of Curriculum Intervention Received. A sizable gain was observed for the PICC intervention condition, a slight but significant gain was observed for RVCR, and no gain was found for the IICC intervention condition. Whereas the RVCR gain stems almost exclusively from a clarification of ambiguity (a switch away from uncertain responses), the PICC gain shows the same amount of loss of uncertain responses as RVCR, but also a significant reduction in negative response rates. The PICC intervention condition, moreover, was the only intervention condition that showed any clear reduction in negative attitudinal response rates.

Table VII

Main Effects for Percent Correct (Positive) Attitude Score Changes by Group, Type of Intervention, and Combined Level of Primary Prior Exposure (N=881)

	<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GROUP: A	482	6.24	6.41	
B	399	6.41	6.21	0.00
TI: PICC	434	10.77	9.54	
IICC	192	.96	1.53	
RVCR	255	2.78	4.44	0.25
CLPPE: minimal	275	11.89	10.08	
low	261	3.75	5.10	
moderate	155	6.81	6.63	
high	190	1.38	2.30	0.23
<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Group(G)	1	8.63	.029	.999
TI	2	4123.97	13.91	.001
CLPPE	3	1963.31	6.62	.001
G x TI	2	397.00	1.34	.262
G x CLPPE	3	29.75	.10	.999
TI x CLPPE	6	370.35	1.25	.278
G x TI x CLPPE	6	127.26	.43	.999
ERROR	857	296.53		
Mult. R. = .29				

Table VIII

Main Effects for Percent Uncertain (Undecided) Attitude Score Changes by Group, Type of Intervention, and Combined Level of Prior Primary Exposure (N=881)

	<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GROUP: A	482	-3.10	-3.23	
B	399	-1.27	-1.11	0.07
TI: PICC	434	-2.72	-2.09	
IICC	192	-0.66	-0.75	
RVCR	255	-2.71	-3.72	0.07
CLPPE: minimal	275	-4.02	-4.32	
low	261	-1.78	-2.19	
moderate	155	-1.86	-1.55	
high	190	-0.75	0.00	0.10

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Group(G)	1	966.76	6.39	.011
TI	2	440.85	2.91	.053
CLPPE	3	590.83	3.91	.009
G x TI	2	103.80	.69	.999
G x CLPPE	3	120.63	.80	.999
TI x CLPPE	6	66.97	.44	.999
G x TI x CLPPE	6	104.52	.69	.999
ERROR	857	151.30		
Mult. R. = .15				

Table IX

Main Effects for Percent Incorrect (Negative) Attitude Score Changes by Group, Type of Intervention, and Combined Level of Prior Primary Exposure (N=881)

	<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GROUP: A	482	-3.09	-3.13	
B	399	-5.10	-5.05	0.06
TI: PICC	434	-7.96	-7.36	
IICC	192	-0.27	-0.75	
RVCR	255	-0.08	-0.72	0.25
CLPPE: minimal	275	-7.78	-5.70	
low	261	-1.95	-2.88	
moderate	155	-4.90	-5.03	
high	190	-0.60	-2.25	0.18
<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Group(G)	1	798.17	3.36	.064
TI	2	3936.11	16.59	.001
CLPPE	3	517.45	2.18	.087
G x TI	2	113.33	.48	.999
G x CLPPE	3	257.10	1.08	.356
TI x CLPPE	6	135.23	.57	.999
G x TI x CLPPE	6	79.95	.34	.999
ERROR	857	237.28		
Mult. R. = .27				

Table X

Main Effects for Percent Scaled Attitude Score Changes by Group,
Type of Intervention, and Combined Level of Prior Primary Exposure
(N=881)

	<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GROUP: A	482	4.70	4.80	
B	399	5.78	5.66	0.03
TI: PICC	434	9.41	8.50	
IICC	192	.63	1.16	
RVCR	255	1.43	2.59	0.26
CLPPE: minimal	175	9.89	7.92	
low	261	2.87	4.01	
moderate	155	5.88	5.86	
high	190	1.01	2.31	0.22

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Group(G)	1	158.98	.69	.999
TI	2	3965.07	17.27	.001
CLPPE	3	1095.13	4.77	.003
G x TI	2	228.12	.99	.999
G x CLPPE	3	115.18	.50	.999
TI x CLPPE	6	236.68	1.03	.404
G x TI x CLPPE	6	76.81	.33	.775
ERROR	857	229.65		
Mult. R. = .29				

Table XI

Summary of Main Effect Means for Attitude Score Change by Group,
Type of Intervention, and Combined Level of Prior Primary Exposure
(N=881)

<u>Group</u>	<u>n</u>	<u>Correct (Positive)</u>	<u>Uncertain (Undecided)</u>	<u>Incorrect (Negative)</u>	<u>Scaled Score</u>
A	482	6.24	-3.10	-3.09	4.70
B	399	6.41	-1.27	-5.10	5.78
<u>TI</u>					
PICC	434	10.77	-2.72	-7.96	9.41
IICC	192	0.96	-0.66	-0.27	0.63
RVCR	255	2.78	-2.71	-0.08	1.43
<u>CLPPE</u>					
minimal	275	11.89	-4.02	-7.78	9.89
low	261	3.75	-1.78	-1.95	2.87
moderate	155	6.81	-1.86	-4.90	5.88
high	190	1.38	-0.75	-0.60	1.01

TI = Type of Intervention; namely the degree to which the CASPAR Curriculum was implemented in the classroom by teacher

PICC = Proper Implementation of CASPAR Curriculum in Classroom

IICC = Improper Implementation of CASPAR Curriculum in Classroom

RVCR = Rival Comparison Curriculum

CLPPE = Combined Level of Prior Primary Exposure

GROUP A = Upper Limit Estimator

GROUP B = Lower Limit Estimator

Table XII

Summary of F-Ratios for Attitude Score Changes by Group, Type of Intervention, and Combined Level of Prior Primary Exposure (N=881)

	<u>df</u>	<u>Correct (Positive)</u>	<u>Uncertain (Undecided)</u>	<u>Incorrect (Negative)</u>	<u>Scaled Score</u>
Group (G)	1	0.0	6.4*	3.4*	0.7
TI	2	13.9*	2.9*	16.6*	17.3*
CLPPE	3	6.6	3.9*	2.2*	4.8*
G x TI	2	1.3	0.7	0.5	1.0
G x CLPPE	3	0.1	0.8	1.1	0.5
TI x CLPPE	6	1.3	0.4	0.6	1.0
G x TI x CLPPE	6	0.4	0.7	0.3	0.3
ERROR	857				

TI = Type of Intervention; namely the degree to which the CASPAR Curriculum was implemented in the classroom by teacher

PICC = Proper Implementation of CASPAR Curriculum in Classroom

IICC = Improper Implementation of CASPAR Curriculum in Classroom

RVCR = Rival Comparison Curriculum

CLPPE = Combined Level of Prior Primary Exposure

GROUP A = Upper Limit Estimator

GROUP B = Lower Limit Estimator

Given the data that has been presented, it would seem reasonable to conclude that what most distinguishes student attitude change rates was Type of Intervention Received and Combined Level of Prior Primary Exposure. Students in the PICC intervention condition changed from the lowest initial attitude state to the highest final attitude state. Students with lesser amounts of prior exposure to alcohol education show greater attitudinal gains than their counterparts, but not sufficiently to erase all discrepancies among levels of prior exposure. In terms of attitude changes and change rates the RVCR intervention condition succeeded only in reducing uncertain response rates, whereas the IICC intervention condition did not change any of the three attitudinal response rates. Only the PICC intervention condition succeeded in significantly reducing negative attitude response rates and again this reduction cannot be said to be due to simply the number of instructional sessions received.

This type of intervention-related difference in attitudinal change rates, moreover, is an extremely interesting finding as it clearly demonstrates that positive attitude changes may be observed without any significant reduction in negative attitudinal responses; namely the attitudinal outcomes of the RVCR intervention condition. Such attitude changes as observed in the RVCR intervention condition are difficult to characterize as true or significant attitude changes, as there has been no significant reduction in negative attitude responses. It is significant reductions in negative attitude responses, moreover, that tend to be conceptually associated with the often-stated goal of changing attitudes about alcohol use and abuse. That there may be only clarification-of-uncertainty change as observed in the RVCR intervention conditions suggests that many of the findings on a lack of a relationship between attitude changes and consumption rate change may be quite spurious due to the nature of the analyses performed on the data; namely, due to not using changes in negative attitude response rates in the prediction of changes in consumption rates. This suggestion is by no means established in the present evaluation, but the point bears close scrutiny in terms of further research work in this area.

Overall, from the data that has been presented in this chapter, it would seem that the following conclusions could be drawn:

(1) Proper Implementation of the CASPAR Curriculum was the superior intervention condition. The PICC intervention condition produced greater knowledge and attitude changes than either the IICC or RVCR intervention conditions. In terms of knowledge changes, the PICC intervention conditions produced the greatest decrease in incorrect response rates whereas the RVCR intervention condition did not significantly reduce incorrect response rates. In terms of attitude changes, the PICC intervention condition was the only intervention condition that produced a significant decrease in negative attitude response rates. The degree to which the PICC intervention condition increased positive attitude response rates was also the highest.

Proper Implementation of the CASPAR Curriculum, therefore, produced gains and the best gains in terms of both knowledge and attitudes, and was the only intervention condition that significantly affected both knowledge and attitudes if incorrect response rates are used as the evaluation criterion.

(2) Improper Implementation of the CASPAR Curriculum succeeded only in producing better knowledge results than the RVCR intervention condition. The IICC intervention condition produced no attitude changes. The outcomes of the IICC intervention condition clearly demonstrate two points. The first of these two points is that a clear and complied-with implementation policy is needed if one wishes to achieve maximal and consistent effects. The second point is that the outcomes observed in the Proper Implementation of the CASPAR Curriculum condition are due to more than simply the number of sessions factor as IICC students had the same number of lessons as PICC students, thus providing control on this factor.

(3) The Rival Curriculum intervention condition succeeded in producing only minimal knowledge gains and weak attitude changes. In both cases, the gains were not due to a reduction in incorrect responses but only to a reduction in uncertain response rates. This clarification of uncertainty effect may be all that can be realistically expected from Alcohol Education Weeks in school. Such forms of intervention, moreover, may do no more than energize the change process and then let it fall from consciousness to oblivion. More research is definitely needed on this point.

(4) The linear effects observed across levels of prior exposure in terms of pre-to-post test gains in knowledge and attitudes strongly suggest that there is a point of diminishing returns in periodic alcohol education which addresses only basic factual and attitudinal areas. It should be pointed out that data on the decision-making skills of students could not be utilized in this study. The CASPAR Curriculum encourages teachers to decrease the emphasis on basic facts and attitudes as the grade level increases and to devote increasing amounts of time to decision-making skills in problematic areas geared to their day-to-day experiences with alcohol. Measurement of this growing emphasis on decision-making skills might yield linear developmental effects across grade levels.¹

(5) The superiority in gains of A group students over B group students suggests that all instructional methods and activities need to be thought about more closely in terms of B group students and their characteristics. Although this superiority in A group outcomes is somewhat misleading in terms of overall program impact (see Chapter VIII), it does suggest that instructional developers should think more carefully

¹What the point of diminishing returns for focusing on basic fact and attitude areas only is, in reality, not clear from the data, but periodic exposure to the same content model does need to be thought about much more closely.

about the match between activities and client populations as A group - B group differences were also observed in the RVCR curriculum community.

This chapter has focused on two types of alcohol education outcomes; namely, changes in knowledge and attitude profiles due to type of intervention. As stated in Chapter II, there is a third class of outcomes which could also serve as a criterion for evaluating the effectiveness of an alcohol education program. This class of outcomes was called the frequency and the quality of occurrence of critical incidents.

The frequency and the quality of occurrence of critical incidents was said to be an important program effect as it reflected the intervention's potential ability to broker or mediate students to more prolonged and sophisticated agents or agencies of change. Such mediation of students, it was also said in Chapter II, might be as important an outcome of exposure to alcohol education as initial knowledge or attitude changes. Chapter VIII presents the data on the occurrence of critical incidents in the PICC and IICC intervention conditions. No critical incidents data, unfortunately, could be collected for the RVCR intervention condition. Regardless of this lack of an external comparison group, however, the data are quite clear in terms of two important points. The first of these two points is that intervention effects for B group students look to be quite different from the outcomes observed in this chapter when the critical incident criterion is employed as the conceptual focus of evaluation. The second point is that alcohol awareness education does seem to act as a stimulating catalyst in terms of both energizing and beginning the change process, as will be seen in the next chapter in this report.

CHAPTER VIII

CRITICAL INCIDENTS FINDINGS: DIRECT EVIDENCE OF MEDIATION EFFECTS

The preceeding chapter focused on the knowledge and attitude outcomes of the CASPAR Alcohol Education Curriculum. This chapter focuses on the third class of outcomes that could be used as an evaluation criterion for an alcohol education program: namely, the frequency and quality of the occurrence of critical incidents during the course of instruction.

To refresh the reader's memory on this variable, a summary of pertinent material from Chapters II and IV will first be presented. Following a description of the Critical Features Scale, findings will be outlined. (See Appendix V for Development and Methodological Use of the Critical Features Scale).

The Critical Features Scale draws upon the conceptual frameworks of (1) the work done by Flanagan (1958) in terms of studying the critical incidents in the accident rates of air traffic controllers, and (2) the work of Ulric Neissen (1967) on feature analysis theory of perception. Combining the work of these two researchers into one methodology led to a Critical Features Scale, since the observation of any critical incident is dependent upon the feature or features of events one attends to in terms of information collection.

Overview

The evaluation of instructional program effects traditionally operates on a pre-to-post, group-level, gain-score model. A group is traditionally tested, treated, and re-tested whereupon the group is then given a group-level gain score by subtracting, summing, and averaging individual test results. This operating model is simple, broad in scope, and precise. The model assumes, however, that the strength and direction of individual gains are subsumed under the formulation of the group mean gains. A new operating model becomes necessary, however, if the strength and direction of the individual gains of only a few students defines the gains for the group observed. It is, therefore, the typical and predictable gains of selected individuals that a Critical Features Scale must be capable of detecting.

During Cycle 1 the two seventh-grade teachers who were implementing the CASPAR Curriculum made some unique observations such as quiet students suddenly becoming active, others withdrawing, one crying, another very angry, and a few seeking help about alcoholism in their families. These observed behaviors were immediately seen by the program as important effects of teacher implementation of the curriculum. The problem was to properly capture and index them. It was this grounded field observation experience, then, that lead to the development of the Critical Features Scale.

To capture the behaviors observed by Cycle 1 teachers, a critical features scale was developed in micro-evaluation cycle 2. Each new curriculum implementation cycle teacher was then asked to observe his or her students (using code names) according to nine features such as "student becomes very emotional." The occurrence or non-occurrence of these critical incidents are viewed as another order of program effects.

Definition of Terms

1. Category - a description of a critical feature that is an item on the critical features scale
2. Code Name - name given by teacher for student that is used on the critical features scale. It is not the same as the student's CASPAR code name
3. Critical Feature - an observed behavior that signals to the teacher the possibility that a student has alcohol related concerns. The Critical Features Scale is the instrument that was developed to track students' critical features. There are two forms of the instrument: the preliminary form Ia and the revised form Ib. The Critical Features Ratio is the number of students in a group divided by the reported number of students having a critical feature(s).
4. Critical Incident - an important event or experience in a person's processing of information. Here, it refers to an event or experience that triggers in the student a response perceived by the teacher as a critical feature.
5. Identification - teacher's report of observing a critical feature for a student. Unique Identifications refer to the number of individual students for whom teachers report critical features. Repeated Identifications refer to the number of critical features observed by a teacher for the same student.
6. Idiographic - individual vs. group-oriented approach to research analysis.
7. Level - subgroup of categories on the critical features scale. Level III includes critical features behavior such as students talking about alcohol related problems and being referred
8. Referral - any student for whom a teacher contacted the program and set up an appointment to talk to a peer leader, staff person and/or to participate in CASPAR groups

Logical Structure of the Critical Features Scale

Conceptually, the critical features scale employed has three levels. Each level, along with its key features, is presented below:

CRITICAL FEATURES

Level I

1. Active student becomes observably passive
2. Passive student becomes observably active
3. Student hangs around after class (or after school) asking questions.

Level II

1. Student mentions talking to his/her family about the course
2. Student becomes very emotional
3. Student makes revealing comments in class

Level III

1. Student (privately) talks about drinking problem of someone else.
2. Student (privately) talks about own drinking problem
3. Student comes after school for help and student is referred or student seeks help and is referred

Level I represents changes in the way the student usually receives or responds to educational material or content. Teachers have observed students suddenly becoming very active or withdrawn, or coming up after class to ask questions about the session. These reactions we hypothesize tend to indicate an initial awakening of personal value or threat in terms of the content encountered.

Level II represents a more personal and emotional student response to the message of the curriculum. Teachers have observed students during class or in small group discussions talking about personal alcohol-related situations, making revealing comments or suddenly breaking down in tears. These reactions point to a beginning personal and affective realization of alcohol-related problems and perhaps an unconscious but involuntary cry for help.

Level III represents the student privately talking to the teacher and admitting an alcohol-related problem in the family, with friends, and/or self and seeking help for the situation from an adult.

It should be noted that these levels were developed by logical analysis of the categories. The categories were placed in a higher or lower level according to how probable the observed behavior was due to alcohol related problems. Level I behaviors could be due to factors other than alcohol related problems such as the student simply enjoys doing something different. The Level I behaviors suggest the possibility but need further behavioral support. Level II behaviors seem to more specifically point to alcohol related problems. The Level II behaviors are, therefore, more probable indicators but only at Level III has the evidence of alcohol-related problems become highly specific and certain.

It should also be noted that the key features were not presented to the teachers according to any hierarchical structure nor were they given any prior theoretical interpretation of the scale. This procedure was adopted to avoid having teachers fitting student behaviors to the scale rather than vice versa. Each teacher was simply introduced to the components of the scale and then asked to follow the directions printed in the logs.

Critical Features Scale Findings

The following points need to be made before interpreting the findings:

- (1) The findings are based only on the Cycle II, III, and IV teachers (N=15). The scale was developed from the observations of the two Cycle I teachers.
- (2) Most of the findings use only "unique identifications"; namely, although a code name may be repeated many times across categories and sessions, the code name represented the same individual and was counted only once. Analyses were also made using "repeated identifications" (regardless of code name repeats), and the results paralleled those of unique identifications. Further, there was somewhat less than a logical fit when total identifications and class size were used to calculate the critical feature ratio, in that the ratio assumes a one-to-one correspondence. Total identifications, therefore, produced a somewhat biased and misleading ratio.
- (3) The findings are presented according to the unique identifications for the entire scale and Level III. Presenting both gives a broader, more specific, and simpler picture of the results.
- (4) The "other" category was considered part of the scale and was interpreted as a Level I identification.

During the implementation of the curriculum the 15 teachers using the Critical Features Scale made 172 observations and identified 114 different students by at least one of the categories on the scale. If these figures are transformed into a ratio by dividing the estimate of the total population evaluated ($N=682$) by 114, the critical features ratio on the entire scale was 6.0.¹ Thus, for every six students, one student was identified on the scale or for every classroom (with 25 students on the average) four students were identified by the teacher.

If one examines just Level III unique identifications, (namely, students privately talking to teachers about alcohol-related problems) 18 different students were reported. This comes to about one in every 38 students or two students for every three classes.

Although none of the 15 curriculum implementation teachers reported any referrals in their process logs during their teaching sessions, the CASPAR program does have records of 12 students referred by these teachers during the implementation period.² All of these referrals were made by the junior high implementation teachers and only two of the referrals came from male teachers; however, it must be kept in mind that female teachers outnumber the male teachers nine to six.

As can be seen from Table I, female teachers made significantly more identifications over the entire curriculum implementation period than males did ($\chi^2 = 18.6$; d.f. = 1; $p < .001$).

Table I: Total Unique Identification Ratios by Group and Sex of Teacher

Group	Males (N=6)	Females (N=9)	Total
A	17.4	5.5	7.3
B	<u>10.3</u>	<u>3.6</u>	<u>4.9</u>
Total	13.1	4.5	6.0

Ratio = Number of students in a cell divided by the number of individual students observed across all levels of the critical features scale.

¹Pre-test N's are assumed to give only slight underestimates of class size.

²Students came from non-tracked classes or were referred after actual teaching. Of the 12, one student did not follow up; two talked to peer leaders; and nine participated in groups.

Female teachers reported an identification for one out of every four or five, while male teachers reported an identification for one out of every 13 students.

As can be seen from Table II, female teachers also tended to make more Level III identifications especially in the B groups ($\chi^2 = 7.2$; d.f. = 1; $p < .01$).

Table II: Level III Unique Identification Ratios by Group and Sex of Teacher

Group	Males (N=6)	Females (N=9)	Total
A	69.5	47.0	53.4
B	<u>124.0¹</u>	<u>16.8</u>	<u>28.0</u>
Total	131.0	26.3	37.9

Ratio = Number of students in a cell divided by the number of individual students observed in Level III.

¹Zero identifications in cell. Ratio is based on assuming one identification and adding one to the number of students in the cell.

As also can be seen from Table I, there is a significant difference between the number of identifications made in A and B groups ($\chi^2 = 4.0$; d.f. = 1; $p < .05$). While teachers identified one out of every seven A group students, they at the same time identified one out of every five B group students. There is also a similar tendency for Level III identifications (Table II); except for the male teachers who identified no B group students compared to identifying only two A group students. It must be noted that at Level III only 18 identifications in all are being analyzed.

Tables III and IV present total Unique and Level III identifications according to group and school level of the teacher.

While there were no significant differences between junior and senior high students there were more B group than A group identifications in both school levels for total unique (Table III) and there were significantly more Level III identifications (Table IV) of senior high B group students ($\chi^2 = 8.5$; d.f. = 1 $p < .01$). Approximately one out of every 15 senior high B group students were reported as talking to a teacher about a drinking problem. In the junior high the opposite tendency was true. However, a comparison of only six identifications in A groups and three in B groups is being made.

Table III: Total Unique Identification Ratios by Group and School Level of the Teacher

Group	School Level		Total
	Junior High (N=9)	Senior High (N=6)	
A	6.2	9.1	7.3
B	<u>5.3</u>	<u>4.2</u>	<u>4.9</u>
Total	5.8	6.2	6.0

Ratio = Number of students in a cell divided by the number of individual students observed across all levels of the critical features scale.

Table IV: Level III Unique Identification Ratios by Group and School Level of the Teacher

Group	School Level		Total
	Junior High (N=9)	Senior High (N=6)	
A	32.0	182.0	53.4
B	<u>61.7</u>	<u>15.4</u>	<u>28.0</u>
Total	41.9	33.9	37.9

Ratio = Number of students in a cell divided by the number of individual students observed in the Level III categories.

Tables V and VI present Total and Level III identification ratios according to group and type of implementation.

Table V: Total Unique Identification Ratios by Group and Implementation

Group	<u>Implementation</u>		Total
	Proper (N=9)	Improper (N=6)	
A	6.5	9.5	7.3
B	<u>5.7</u>	<u>3.9</u>	<u>4.9</u>
Total	6.1	5.8	6.0

Ratio = Number of students in a cell divided by the number of individual students observed across all levels of critical features scale.

Table VI: Level III Unique Identification Ratios by Group and Implementation

Group	<u>Implementation</u>		Total
	Proper (N=9)	Improper (N=6)	
A	120.5	26.6	53.4
B	<u>19.9</u>	<u>109.0</u>	<u>28.0</u>
Total	36.7	40.3	37.9

Ratio = Number of students in a cell divided by the number of individual students observed in Level III.

Though there was no significant difference between proper and improper implementations, there still remained the same tendency for more B than A group identifications for both types of implementations at the total unique identifications level. At Level III it was also true for one of the categories (proper implementers) but not the other (improper).

In general, it was found that female teachers made significantly more identifications than male teachers ($p < .001$) and there were significantly more B than A group identifications ($p < .05$). In respect to the finding concerning A - B groups, it was hypothesized that students

with alcohol-related problems would tend to have school-related problems and, therefore, would tend to gravitate toward the B groups. It does appear that A - B group comparison may support this hypothesis. Teachers, however, commented that B groups were less concerned with earning good marks and pleasing persons in authority and were therefore willing to be more open and honest about feelings and issues of concern to them within the classroom setting.

In respect to the findings concerning female teachers, it might be argued that there is a female bias in the program. But for those code names where sex was labelled there does not seem to be a similar tendency in the sex of the students identified. Males were reported more often than females for total uniques (35 to 21), males only slightly more at Level III (6 to 5), and 5 of the 12 students referred were male. Not knowing the mixture of females to males in the classes it is difficult to determine the true ratios of the above comparisons. Also, it might simply be that female teachers used the scale more conscientiously since two male teachers didn't fill it in at all and two male teachers taught only five sessions. There also seemed to be a female teacher-male student identification preference explaining the above tendency. Female teachers had almost 300% more identifications of males than females on their entire scale and 50% more on Level III.

Concerning the scale itself, it was hypothesized that more critical incident behavior would be observed during the last section of each curriculum unit because the emphasis on alcohol related problems occurred then. Table VII presents the percent of unique identifications according to the first five and last five module sections by scale levels.¹

Table VII: Percent of Total Unique Identifications According to Module Sections and Scale Levels

	<u>Module Sections</u>	
	1-5 %	6-10 %
Level I	45	55
II	65	35
III	44	56
Total	<u>52</u>	<u>48</u>

As can be seen from Table VII, there appears to be no real difference between the first five and the last five sections on the number of unique identifications except for Level II where there are more in the first than in the second half. It would therefore appear that students exhibiting critical incidents respond to the material at different times. A mediating factor, however, may have been the students' previous exposure, i.e., that is, students with prior exposure may have reacted earlier than expected.

¹Except for two teachers, the module sections were presented in the order given in the curriculum.

Table VIII presents the order of the individual categories in respect to the number of identifications (repeats counted) made.

Table VIII: Critical Feature Categories According to Identification Frequencies (Repeated Identifications Counted)¹

<u>Category</u>	<u>Frequencies</u>
1. Passive student becomes observably active	58
2. Other	35
3. Student makes revealing comments in class	20
4. Active student becomes observably passive	19
5. Student talks (privately) about drinking problem of someone close	17
6. Student hangs around after class (or school) asking questions	9
7. Student becomes very emotional	8
8. Student mentions talking to his/her family about the course	3
9. Student talks (privately) about own drinking problem	3
10. Student comes after school for help and student is referred or student seeks help and is referred	0
Total	172

¹The number of critical features observed by a teacher for the same student for each category.

The category with the most identifications was "Passive student becomes observably active". As stated earlier, in relation to interpreting these results, the Hawthorne effect must be kept in mind, i.e., any change in school activity is welcomed. It should be noted how many times teachers observed behaviors that did not fit into the scale (N=35) suggesting the need for possible revisions or elaborations of the scale itself. Examples of "other" features were "student stoned", "student brings in alcohol abuse pamphlet", "student talks about seeing a drinking contest" and "student asks for more literature."

The logical structure and conceptualization of the scale is empirically supported in Table IX.

Table IX: Critical Feature Identification Frequencies by Scale Level

<u>Critical Feature Scale Level</u>	<u>Frequencies</u>
1	121
2	31
3	20
Total	172

The greatest number of identifications occurred in the Level I category (N=121), as expected. These behaviors signal unique responses to the subject matter but cannot be definitively related to an alcohol problem. The frequency of reports decrease with the probability of the behavior being associated with an alcohol problem. This avoidance behavior is predictable in the light of the well-known phenomenon of denial and the pain associated with recognizing the problem. That 20 Level III identifications were cited is noteworthy in itself recognizing the difficulty of identifying these children as reported in the literature. (See Deutsch, 1978).

Concerning further evidence of Level III critical feature behaviors, CASPAR program trainees were asked on the delayed post-test (June '77) to indicate the approximate number of students they talked to outside of classroom discussions about alcohol related problems and the approximate number they referred during the '76-'77 school year. Table X presents the delayed post results comparing the implementation teachers with other junior and senior high CASPAR trained teachers.

As can be seen from Table X, the CASPAR program trainees made over 700 Level III critical feature observations¹ and the implementation teachers made proportionally more than the other trained junior and senior high teachers (10.4 to 8.4 respectively). However, though the implementation teachers report talking to proportionally more students about different alcohol related problems especially family related problems, they report referring proportionally fewer students than the other teachers although one of the other senior high teachers reported more than half of the referrals and the implementation teachers tended to underestimate their referrals.

¹It is not known how many of these observations are unique identifications. Different teachers could have observed the same students.

Table X: The Number of Students Reported Talked to and Referred Comparing the Implementation Teachers with other Junior and Senior High CASPAR Trained Teachers and all Trainees

	Implementation Teachers (N=15) ¹		Other Trained Junior and Senior High Teachers (N=20)		All Trainees (N=74) ²	
Number of Students Talked to About:	<u>N</u>	<u>per teacher ratio</u>	<u>N</u>	<u>per teacher ratio</u>	<u>N</u>	<u>per teacher ratio</u>
a. student's own use of alcohol	53	3.5	72	3.6	248	3.3
b. a friend's use of alcohol	57	3.8	57	2.9	184	2.5
c. alcohol problems in the student's family	<u>32</u>	<u>2.1</u>	<u>20</u>	<u>1.0</u>	<u>223</u>	<u>3.0</u>
Total:	142	9.5	149	7.5	655	8.8
Number of Students Referred:	<u>14³</u>	<u>.9</u>	<u>19⁴</u>	<u>1.0</u>	<u>69⁵</u>	<u>.9</u>
Total	156	10.4	168	8.4	724	9.8

¹The two teacher specialists were dropped and the two Cycle I teachers were added. For both comparison groups teachers were regular classroom teachers.

²Includes social workers, nurses, and counselors.

³Teachers report 8 referrals but the program has records of 14

⁴The program has record of three referrals to CASPAR by these teachers.

⁵The program has record of 20 referrals. Trainees were using other referral sources such as school counselors.

In conclusion, therefore, it is difficult to estimate the true nature of the curriculum's effect in this area because of the following reasons:

- (1) the scale itself was a new tool that is still being developed and that still needs to be examined theoretically and practically in relation to the appropriateness, sensitivity, and format of its categories as exemplified by the high use of the "other" category by teachers; and

- (2) The lack of data on a control group or exact estimates of how many students actually had alcohol related problems.

However, the following is known:

- (1) proportionally more students started talking about alcohol related problems with implementation teachers than other trained junior and senior high teachers;
- (2) during the curriculum implementation, 18 students talked about their alcohol related problems and 12 students sought help, 11 of whom followed through; and
- (3) teachers and students communicated with each other at a very existentially important level which in itself is seen as a valuable outcome of the curriculum implementation and worthy of further exploration.

CHAPTER IX
STUDENT, TEACHER, AND STAFF
CURRICULUM PROCESS RATINGS

Students

As detailed in Chapter IV, students were asked to fill in feedback sheets at the end of sessions according to different micro-evaluation schedules. Because of instrument changes over micro-evaluation cycles, only four rating scale items remained constant across all cycles. (See Appendix I for copies of student feedback sheets). These are:

- (1) "Hard-Easy"
- (2) "Confusing-Clear"
- (3) "Boring-Interesting"
- (4) "Not new to me - New to me"

Figure 1 depicts the "Hard-Easy" feedback item analyzed by percent/score according to school level, group, implementation, and sex (see Appendix VII for four way analysis of variance tables). As can be seen from Figure 1, students in general rated the sessions easy ($\bar{x}=82\%$).¹ Male students reported the sessions less difficult than female students ($p<.05$). Senior high students in the proper implementation found the sessions easier than the junior high students while the opposite was true for students in the improper implementation ($p<.001$).

Figure 2 portrays the "Confusing-Clear" feedback scale item. As can be seen from this figure, students in general found the sessions clear ($\bar{x}=82\%$). Female students found the sessions clearer than male students except for the female students in the improper implementation, especially the B group females.

Figure 3 pictures the "Boring-Interesting" feedback scale item. As the figure shows, students found the sessions interesting ($\bar{x}=79\%$). Junior high students found the sessions more interesting than senior high students ($p<.05$) and female students found the sessions more interesting than male students ($p<.01$). Curriculum implementations (proper and improper) played a key role in determining student interest; interest tended to increase from junior to senior high level for both A and B group females and A group males in the proper implementation ($p<.10$).

¹Students rated sessions on differing scale ranges which were made comparable by converting the rating to a percentage of the scale range. See Chapter IV for more details.

Figure 1: Percent "Hard-Easy" Student Feedback Scale Item Score by Group and Sex According to Implementation and School Level. (N=603)

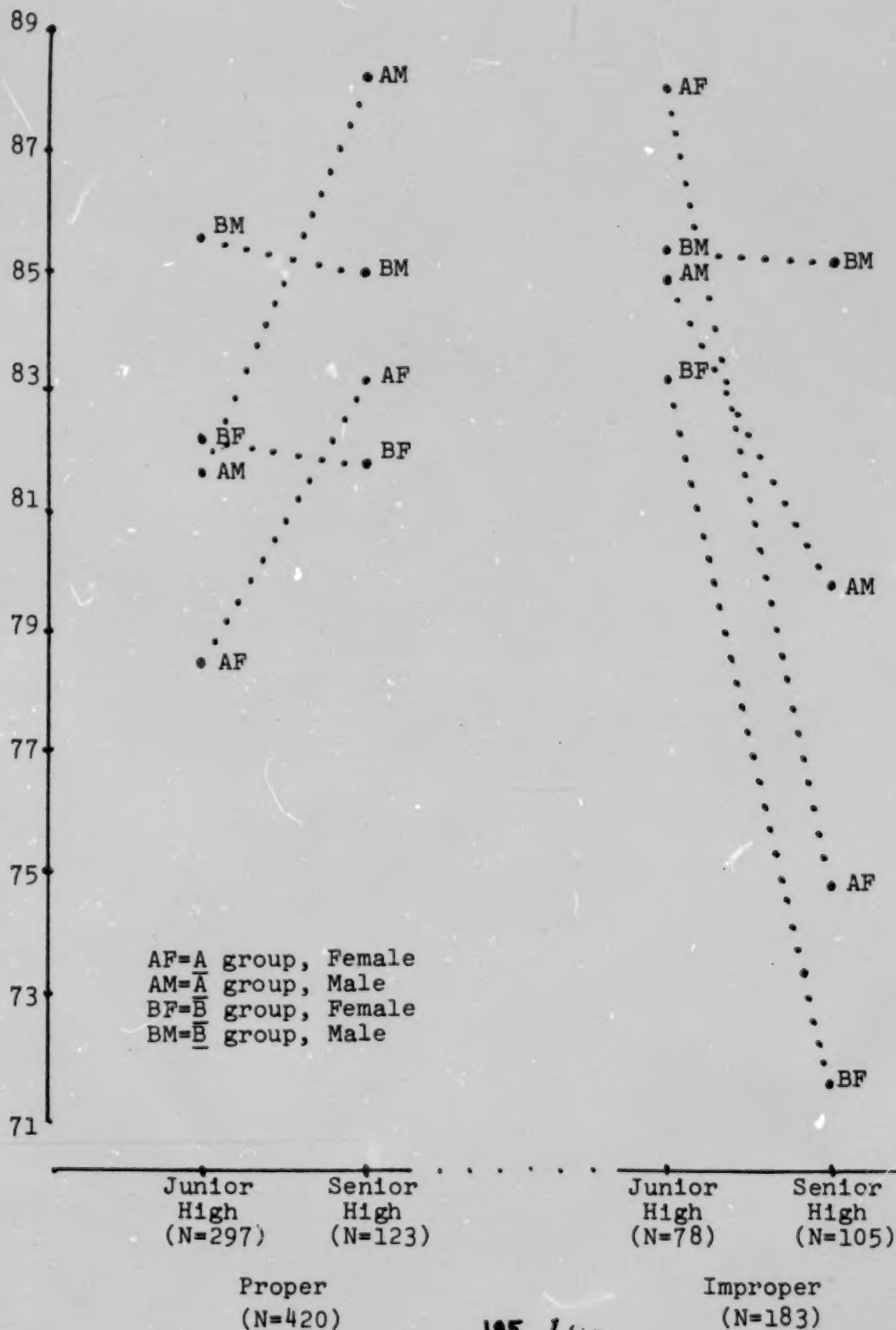


Figure 2: Percent "Confusing-Clear" Student Feedback Scale Item Score by Group and Sex According to Implementation and School Level (N=604)

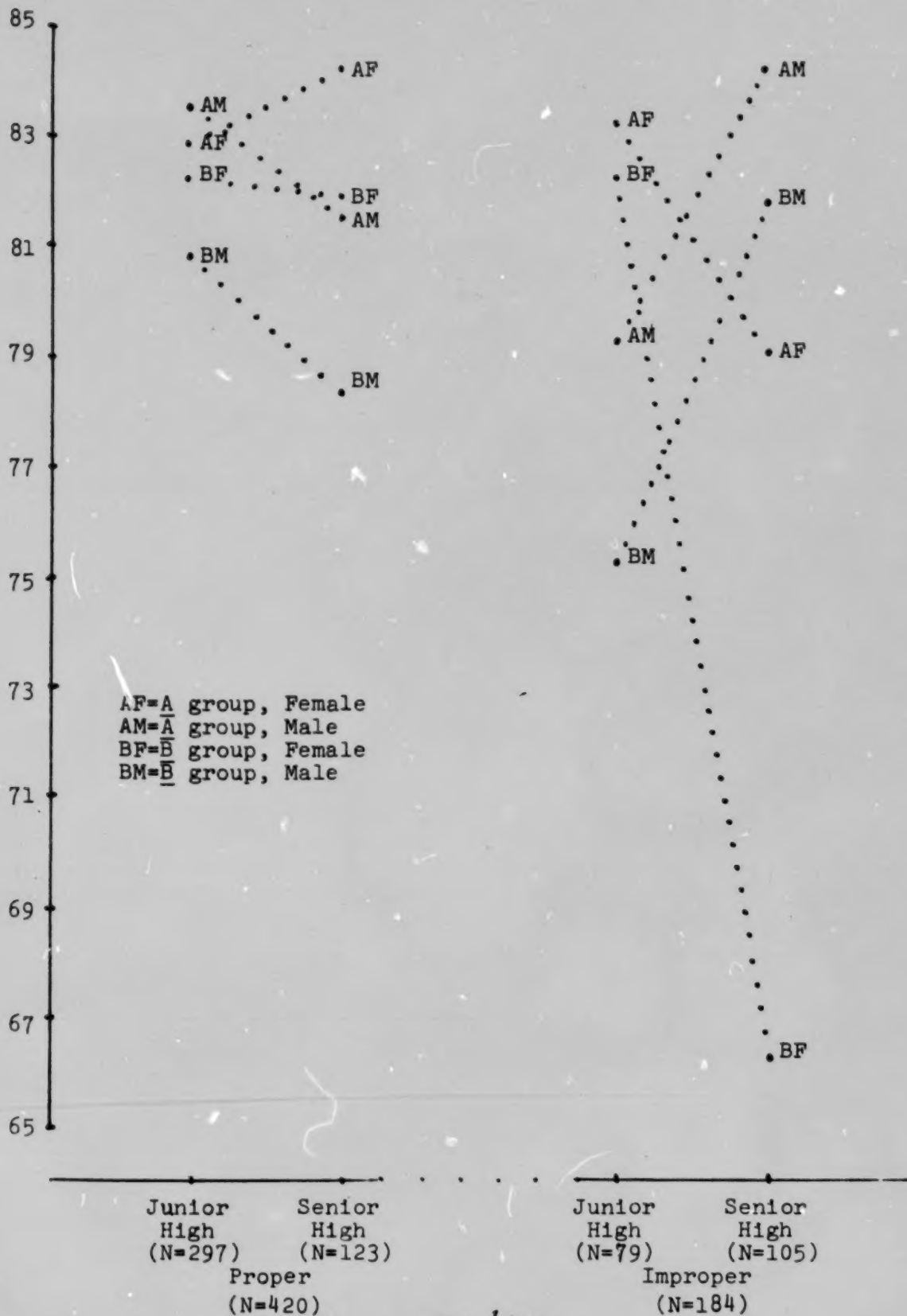


Figure 3: Percent "Boring-Interesting" Student Feedback Scale Item Score by Group and Student Sex According to Implementation and School Level (N=602)

AF=A group, Female
 AM=A group, Male
 BF=B group, Female
 BM=B group, Male

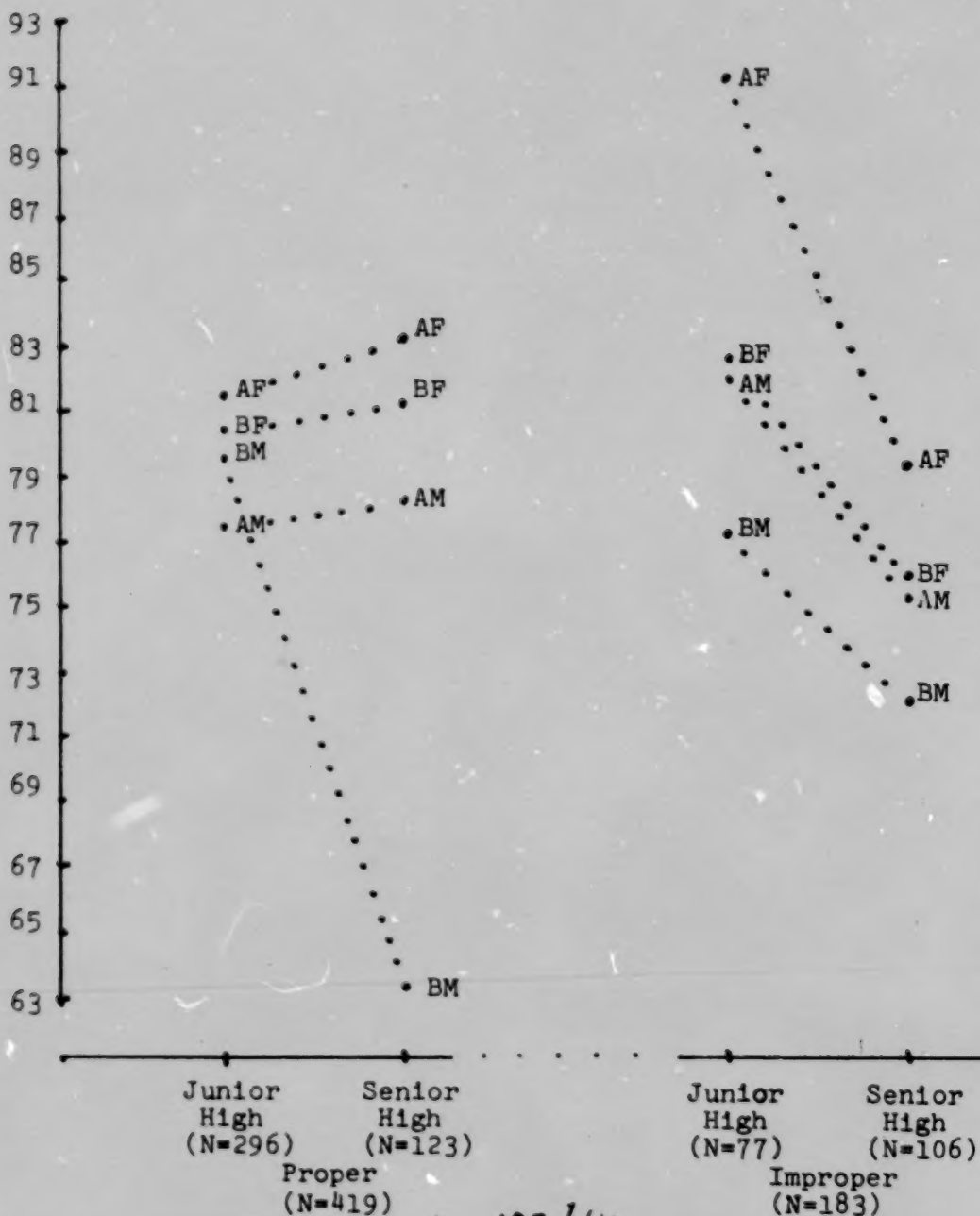


Figure 4 depicts the "Not new to me - New to me" feedback scale item. Overall, students found the sessions somewhat new to them ($\bar{x}=60\%$). Male students found the sessions newer to them than female students ($p<.05$). B group students in proper implementation tended to find the sessions more new to them than the B group students in the improper implementation, whereas the opposite was true of A group students ($p<.10$).

To summarize, students found the sessions easy, clear, interesting, and somewhat new to them. Male students found the sessions easier and newer to them than female students while female students found the sessions more interesting and clearer than the male students except for the female students in the improper implementation who found them less clear than male students. Junior high students found the sessions more interesting than senior high students. ($\bar{x}=80.6$ and 77.3 respectively).

Three points need to be made about the findings:

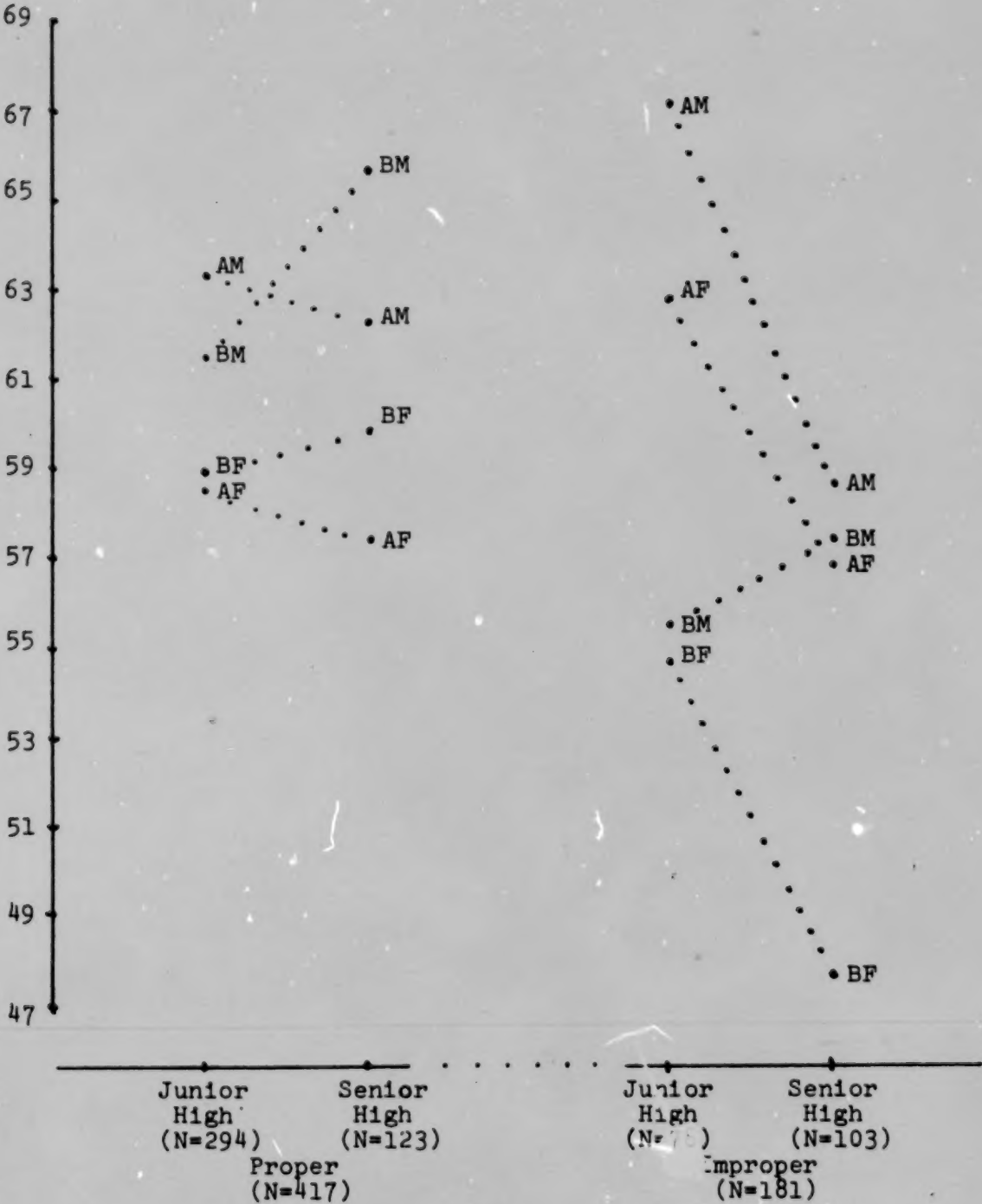
(1) The results in the "Not new to me - New to me" scale item support the position presented in Chapter I that many students had had some form of prior exposure. Additionally, a two way analysis of variance was run on prior exposure and probability of prior activity grades and the following was found:

(a) students with prior exposure found the sessions significantly less new to them and significantly clearer ($p<.05$) than students without prior exposure which was expected; but,

(b) students in high probability of prior activity grades found the sessions slightly but not significantly less new to them than students in the low probability of prior activity grades; however, they did find the sessions significantly less interesting ($p<.01$) than the low probability grade students. The question of why the high probability of prior activity grades found the sessions significantly less interesting but not significantly less new to them has to be examined more fully. It might be that adolescents are simply deficient in their ability to remember what they were taught at prior grade levels.

(2) Although students rated the sessions high on the interest scale, the senior high students reported them less interesting than junior high students. This difference resulted from the low ratings of B group senior high male students in proper implementation and senior high students in improper implementation. This effect may be due to the repetition of the material, but contrary to expectations for the proper implementation students there is a negative relationship between "new to me" and "interesting," i.e., the groups who found the material least boring also reported it least new to them and vice versa. This is also present in the improper implementation but not as strongly. Thus, as in point 1, there seems to be a mediating factor other than prior exposure that is affecting the senior high school students' interest in the content or material.

Figure 4: Percent "Not New to Me - New to Me" Student Feedback Scale Item Scores by Group and Sex According to Implementation and School Level (N=598)



(3) Female students found the sessions more appealing than male students. The males found them less so, not because they found them harder or less new to them, but because they tended to find them more confusing except for senior high students in improper implementation. It may be that the sessions are more confusing for males because the sessions call into question more male-oriented values such as "a kid becomes a man when he can hold his liquor." Because the male student becomes torn between what he has heard on the streets and what he hears in the classroom, he experiences the sessions as "mixing him up" or "confusing."

Also, for the micro-evaluation cycles 2 through 4, space was made for students to write comments or ask questions. Table I presents a content analysis of the general positive or negative nature of the comments according to the factors of school level, group, and implementation.

Table I: Rating of Student Comments as Positive, Negative, or Neither for School Level, Group, and Implementation Factors (the total number of comments was 288)¹

<u>Groups</u>	<u>Positive</u> %	<u>Negative</u> %	<u>Neither</u> %
A	59	22	19
B	61	23	16
<u>School Levels</u>			
Junior High	54	26	20
Senior High	67	18	15
<u>Implementation</u>			
Proper	56	26	17
Improper	67	14	19
TOTAL	60	22	18

¹It must be remembered that the same student could have many comments.

As can be seen from Table I, students made about three times as many positive comments as negative ones. There was little difference between the groups though senior high and improper implementation students tended to make more positive comments than junior high and proper implementation students respectively. A small sampling of the comments are presented below:

Positive

"The number of myths I believed surprised me!"

"Gave me a chance to really hear both sides and make a decision on an important issue. I found that some of my opinions changed."

"I have done it before but it seems like new situations come up all the time and I get something good out of it."

"Dynamite!!"

"I thought this class was good because we showed our true feelings on paper (drawing). The people who do get high would like the class 'cause they're into it. They know where it's at. The kids that do not get high or drunk really don't know how to feel and won't like the class because it's over their heads. They don't know how to react to this subject."

"I think this is really good to be teaching us because everybody seems to be interested because it's either in their family or they drink a lot themselves."

"Alcohol is a good thing to discuss."

"The lesson was very interesting. I learned a lot more than I knew but still want to learn more about alcohol."

"I like it better than science."

Negative

"I think this is too boring. I wish we could do something like science."

"Stupid!! Dumb! Retarded!!"

"Constant repetition of this course makes it boring."

"Not very helpful because I'm not in that situation."

"Well, I didn't like doing it. I don't worry myself with problems. I'm young and don't care about drunks. I'm not a drunk so I don't care."

"Why are you doing this to me?"

Neither

"I don't like talking about alcohol."

"I deal with alcohol every day and night."

"Is drug abuse also a disease like alcoholism?"

"Start earlier - 9th grade."

"It was alright but nothing new. It's a big problem."

Teachers

As detailed in Chapter IV, curriculum implementation teachers were asked to fill in process logs at the end of each class session. Because of instrument changes over micro-evaluation cycles, only general comparisons could effectively be made across cycles.

In general, curriculum implementation teachers thought the sessions went quite well. They gave an overall rating of 6.1 on a 0 to 8 scale.¹ As can be seen in Table II which breaks down the session ratings by school level and group, junior high teachers tended to rate the sessions higher than senior high teachers. This finding parallels that of the senior high students who found the sessions significantly less interesting than the junior high students. As can also be seen from the table, A group sessions tended to be rated higher than B group sessions.

Table II: Teacher Session Ratings by School Level and Group
(0 to 8 Scale)

<u>Group</u>	<u>School Level</u>		<u>Total</u>
	<u>Junior High</u>	<u>Senior High</u>	
	(N=11) <u>x</u>	(N=6) <u>x</u>	
A	6.71	5.44	6.26
B	<u>6.60</u>	<u>4.91</u>	<u>6.01</u>
TOTAL	6.61	5.18	6.13

Table III presents session ratings according to group and implementation.

Table III: Session Ratings by Group and Implementation
(0 to 8 Scale)

	<u>Group</u>		<u>Total</u>
	<u>A</u> <u>x</u>	<u>B</u> <u>x</u>	
Proper (N=11)	6.34	6.31	6.33
Improper (N=6)	<u>6.11</u>	<u>5.45</u>	<u>5.78</u>
TOTAL	6.26	6.01	6.13

¹These ratings are taken from Cycle I and II scale items, asking teachers to rate the "effect" of their sessions and Cycle III and IV scale items asking teachers to generally rate the sessions.

As can be seen from Table III, proper implementers tended to give the sessions higher ratings; they also were more satisfied with their efforts with their B groups than the improper implementers.

Table IV presents session ratings according to group and sex of teacher.

Table IV: Session Ratings by Group and Sex of Teacher (0 to 8 Scale)

Sex	Groups		Total $\bar{x}$
	$\frac{A}{x}$	$\frac{B}{x}$	
M (N=7)	6.29	5.71	6.00
F (N=10)	<u>6.24</u>	<u>6.21</u>	<u>6.23</u>
TOTAL	6.26	6.01	6.13

As can be seen from Table IV, female teachers rate the sessions only slightly higher than the males.

The process ratings of the teacher process logs were examined to determine the percentage of times teachers gave higher ratings to either A or B groups or equal ratings to both.¹ Table V presents these comparisons according to school level.

Table V: Teacher Process Ratings According to School Level
Comparing A and B Groups

	A > B %	B > A %	A = B %
Junior High (N=11)	39	43	18
Senior High (N=6)	54	33	13

¹This procedure was performed because Cycles I and II had different process rating formats than Cycles III and IV.

Senior high teachers tended to more frequently rate A groups better than B groups while in the junior high, teachers tended only slightly to more frequently rate B groups better than A groups.

Table VI: Teacher Process Ratings According to Implementation Comparing A and B Groups

	A > B %	B > A %	A = B %
Proper (N=11)	36	45	19
Improper (N=6)	61	28	11

As seen in Table VI, improper implementers tended to more frequently rate A groups better than B groups whereas the opposite was true of the proper implementers.

Table VII: Teacher Process Ratings According to Sex of Teacher Comparing A and B Groups

	A > B %	B > A %	A = B %
M (10)	53	27	20
F (7)	39	48	13

As shown in Table VII, male teachers tended to more frequently rate A groups better than B groups while the opposite is true of female teachers.

In summary, teachers in general thought their alcohol education sessions went quite well and tended to rate A group sessions higher than B group sessions. Junior high, proper implementing, and female teachers tended to rate the sessions higher than senior high, improper implementing, and male teachers. Concerning A and B group process ratings, junior high, proper implementing and female teachers tended to rate the B groups higher than the A groups while senior high improper implementing and male teachers tended to rate the A groups higher than the B groups.

A content analysis of the teacher comments was also made and their major observations were:

- (1) The sessions were frequently "lively," "interesting," "great," and "stimulating;"
- (2) small group discussions and role plays were initiated with some fear and with difficulty but were valued as important and mostly successful by the end of the teaching experience;
- (3) the alcohol use sessions went easier than the abuse sessions;
- (4) some students had already been exposed to some of the content or activities which gave them a good background but created a challenge to the teacher to insure that they were getting something new or valuable from the experience;
- (5) the younger, slower, and B group students sometimes had difficulty understanding the wording of directions or questions or doing properly some of the activities, such as breaking into small groups;
- (6) B groups were viewed in a new light due to their positive, active participation during the alcohol education unit as compared to the rest of the course; and
- (7) some students were "stoned" during the classes or were concerned about the relationship of drugs and alcohol.

Staff

Of the group sessions evaluated, the education staff observed 38¹ or approximately 13% of the evaluated sessions. There appears to be no bias in relation to teacher sex, group, implementation, micro-evaluation cycle, or curriculum section covered, though the visits were not done randomly.

In general, the staff rated the sessions at 5.8 on a 0 to 8 scale, which is very close to the teachers' own rating of 6.1.² The staff tended to rate the sessions in the following way:

- (1) sessions with proper implementation teachers higher than with improper implementation teachers (6.0 to 5.4);
- (2) the A group sessions slightly higher than the B group sessions (5.8 to 5.5);
- (3) junior high sessions slightly higher than senior high sessions (5.9 to 5.6);
- (4) female teachers very similar to male teachers (5.8 to 5.7).

¹The staff also visited eight other non-tracked sessions.

²Ratings do not include micro-evaluation cycle I teachers. Staff observation scale was developed after the first cycle, and ratings do not include one female improper evaluation teacher.

The staff's major observations were:

- (1) In general, students were "turned on," "involved," and "attentive" and teachers were "organized," "responsive," and "enthused."
- (2) Most of the teachers were able to create an open, informal flexible climate, using themselves as non-authoritarian resource persons as called for in the CASPAR approach. Only a few were unable to change from their usual center-of-attention teaching style to allow students the freedom to work with each other.
- (3) Most of the teachers followed curriculum instructions well and utilized process logs and debriefing sessions with education program staff to make valuable recommendations on curriculum activities which are presently being incorporated in a revised field-tested edition being readied for publication.

Thus, the CASPAR education staff also thought the sessions went well and similar to the teachers' ratings of their own sessions; and tended to rate the proper implementing, A group, junior high, and female taught sessions slightly higher than the improper, B group, senior high, and male taught sessions.

CHAPTER X

TEACHER PRE-TO-POST TO DELAYED POST KNOWLEDGE AND ATTITUDE FINDINGS: SIGNIFICANT CHANGES IN PRIMARY CHANGE AGENTS.

Within the philosophy and objectives of the CASPAR Alcohol Education Program teachers are viewed as primary change agents, second only to program staff. They must first undergo training to equip them with appropriate attitudes, valid knowledge and clear objectives consonant with those of the program. Teachers are responsible for implementing the curriculum utilizing dynamic student centered teaching methods; they also give informal support to students with alcohol related problems; their own or that of a friend or family member; often referring them to other sources of help within the CASPAR program. This chapter offers a closer look at the 91 teachers who participated in the training provided by the CASPAR model workshops including those who went on to implement the curriculum during the '76-'77 school year.

The findings presented are based on the fact and attitude items that are included in the three CASPAR constructed questionnaires. These questionnaires are:

- (1) The pre-test which was administered to trainees in Basic Workshops #2 through #8 (Part I)
- (2) The post-test which was administered to trainees in Basic Workshops #1 through #8 (Part II)
- (3) The delayed post-test which was mailed to and filled in by Basic workshop trainees during the summer of 1977.
(See Appendix I for copies of questionnaires)

Of the 91 Basic Alcohol Education Workshop trainees, 88% of the trainees (N=80) were teachers or teacher specialists (reading, physical education, and Title 1 teachers) and 12% (N=11) were school administrators, librarians, nurses, and counselors. In respect to the pre, post and delayed post tests, 86% of the trainees completed both the pre and the post-test, and 69% (N=63) completed all three tests.¹ The delayed post was administered at the end of the third year of the program so that some teachers took it only three months following completion of a workshop and for others the time lag was 2 ½ years.

The alcohol use and abuse fact and attitude scale is composed of 22 items. Eleven of these are knowledge items and are presented in Table I to follow:

¹A pre-test was not administered to trainees in Basic Workshop #1 (N=13).

Table I: Knowledge about Drinking

ALTERNATIVES AND KEYED RESPONSE

ITEMS

Agree Disagree Not Sure

X

X

X

X

X

X

X

X

X

X

X

1. If people have had too much to drink, they can sober up faster if they have some black coffee or take a cold shower.
2. People who take a cocktail before dinner run a high risk of developing alcoholism.
3. Combining a drink or two with a few barbiturates is no more dangerous than having a few drinks.
4. A 12 oz. can of beer has about the same amount of alcohol as a 1½ oz. shot of hard liquor.
5. Young children who are allowed to drink at home under parental supervision are more likely to develop drinking problems than those who start drinking when they are older.
6. Studies show that it is possible for many alcoholic persons to resume social drinking.
7. Most adults who drink at the rate of about a drink an hour are sober enough to drive safely.
8. Teenage drivers are much more likely than older drivers to be involved in alcohol-related motor vehicle accidents.
9. Most spouses of persons with alcoholism are as much in need of help as people with the illness.
10. Alateen is a self-help organization for teenagers who drink too much.
11. Alcohol is a food as well as a drug.

There are also eleven attitude items. Five of these items refer directly to the trainees' attitudes toward teenage drinking and are presented in Table II.

Table II: Attitudes Toward Teenage Drinking

<u>ALTERNATIVES AND KEYED RESPONSE</u>			<u>ITEMS</u>
<u>Agree</u>	<u>Disagree</u>	<u>Not Sure</u>	
X			1. It is possible for alcohol to be used responsibly by teenagers (13-15 year olds).
X			2. Teenagers should be allowed to decide for themselves whether they should be abstainers or drinkers.
X			3. With sufficient alcohol education for both young people and adults there will be no need for a legal drinking age in the U.S. ¹
X			4. Alcohol education in the classroom can influence teenage drinking.
X			5. Drinking should be legal for 18 year olds.

¹This question was not present on the delayed post test.

The remaining six items represent the trainees' general attitudes toward drinking and are presented in Table III.

Table III: General Attitudes Toward Drinking

<u>ALTERNATIVES AND KEYED RESPONSES</u>			<u>ITEMS</u>
<u>Agree</u>	<u>Disagree</u>	<u>Not Sure</u>	
	X		1. If one of my friends got drunk at a party at my house and danced with a lampshade on his/her head, I'd probably think it was funny.
	X		2. It is useless to say anything to persons with alcoholism about their drinking unless they admit they have a drinking problem.

Table III continued

<u>Agree</u>	<u>Disagree</u>	<u>Not Sure</u>
	X	3. People who don't drink make me uncomfortable at parties.
	X	4. I would be (I am) uncomfortable with discussing alcohol in my classroom.
	X	5. Being able to hold your liquor is a sign of masculinity.
X		6. Problem drinking is really the same as alcoholism.

Pre, Post Workshop Changes

Figure 1 depicts the percent "correct", "not sure", and "incorrect" knowledge scores on the pre to post Basic workshop questionnaire comparing curriculum implementers with non-implementers by sex¹ (see Appendix VIII for two-way repeated measures analyses of variance tables). As can be seen in Figure 1 trainees entered the program moderately knowledgeable (55% correct) and a little uncertain (21% "not sure") and myth-believing (23% incorrect). After the 20-hour workshop, trainees' gains showed that they were now significantly more knowledgeable ($p < .001$), less "uncertain" ($p < .001$) and less myth-believing ($p < .001$). Female trainees became significantly more knowledgeable and significantly less myth-believing than males ($p < .05$). Implementers began significantly less knowledgeable ($t = 2.05$; d.f. 76; $p < .04$) and tended to be initially less certain ($t = 1.75$; d.f. 76; $p < .10$) and became significantly more certain ($p < .05$) pre to post.

Figure 2 depicts the percent positive, "not sure", and negative teacher attitudes toward teenage drinking -- an important determinant of success in creating a classroom climate conducive to open student discussion of issues around drinking values and behavior. All trainees started the workshop program with ambivalent attitudes toward teenage drinking, i.e., positive (33%) and negative (43%); however, they completed the workshop with significantly more positive ($p < .001$) and significantly less uncertain ($p < .001$) and negative ($p < .001$) attitudes toward teenage drinking. Implementers became significantly more positive from pre to post ($p < .05$); they ended up significantly less negative ($t = 2.90$; d.f. 61.47; $p < .01$).

¹The analysis is based on 19 implementation teachers. Two of the teachers including one of the male teachers used in the curriculum analysis took training in Basic workshop before the grant.

Figure 1: Percent Correct, "Not Sure" and Incorrect Knowledge Scores Comparing Implementers with Non-Implementers by Sex Pre to Post.

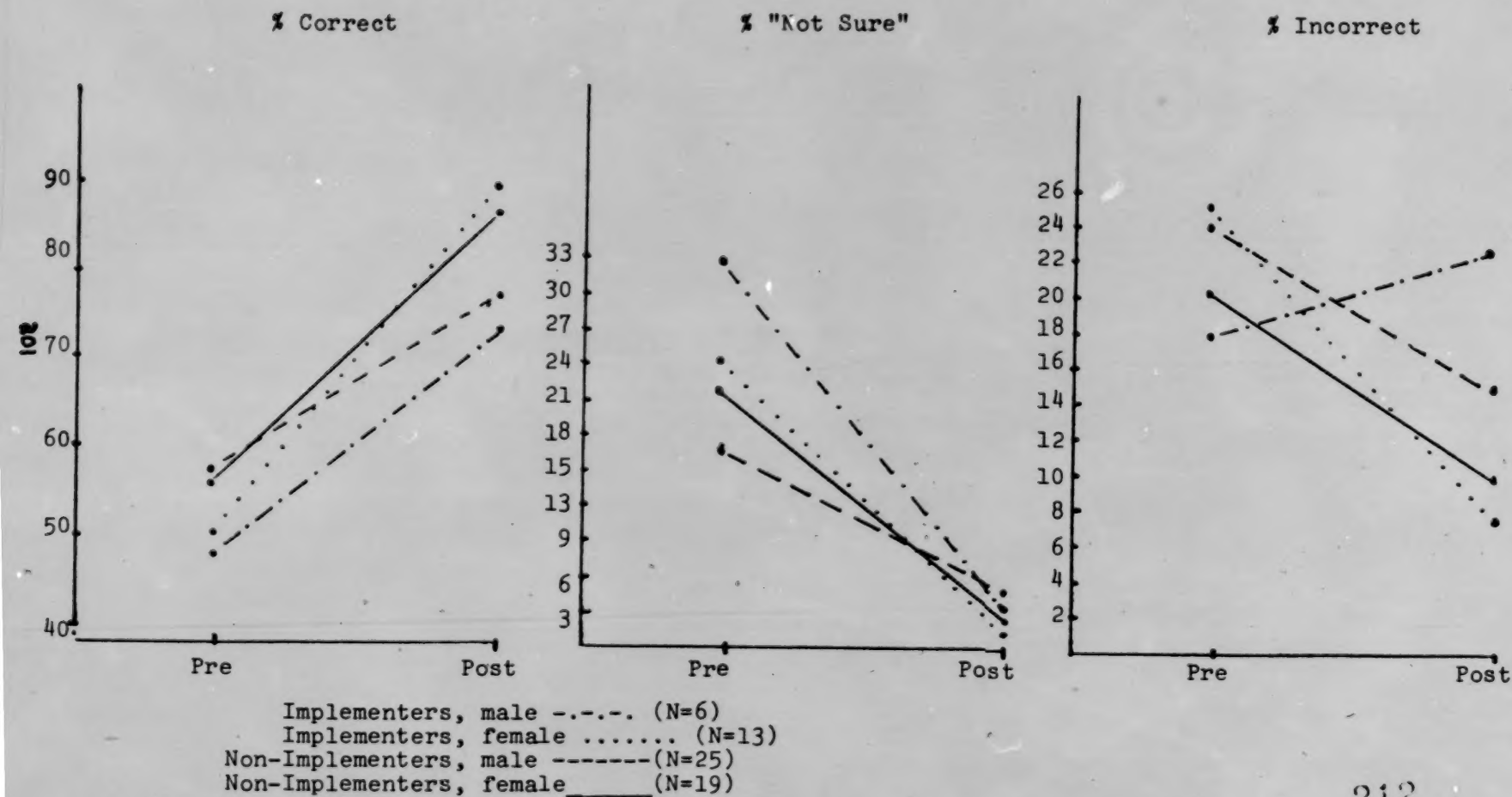
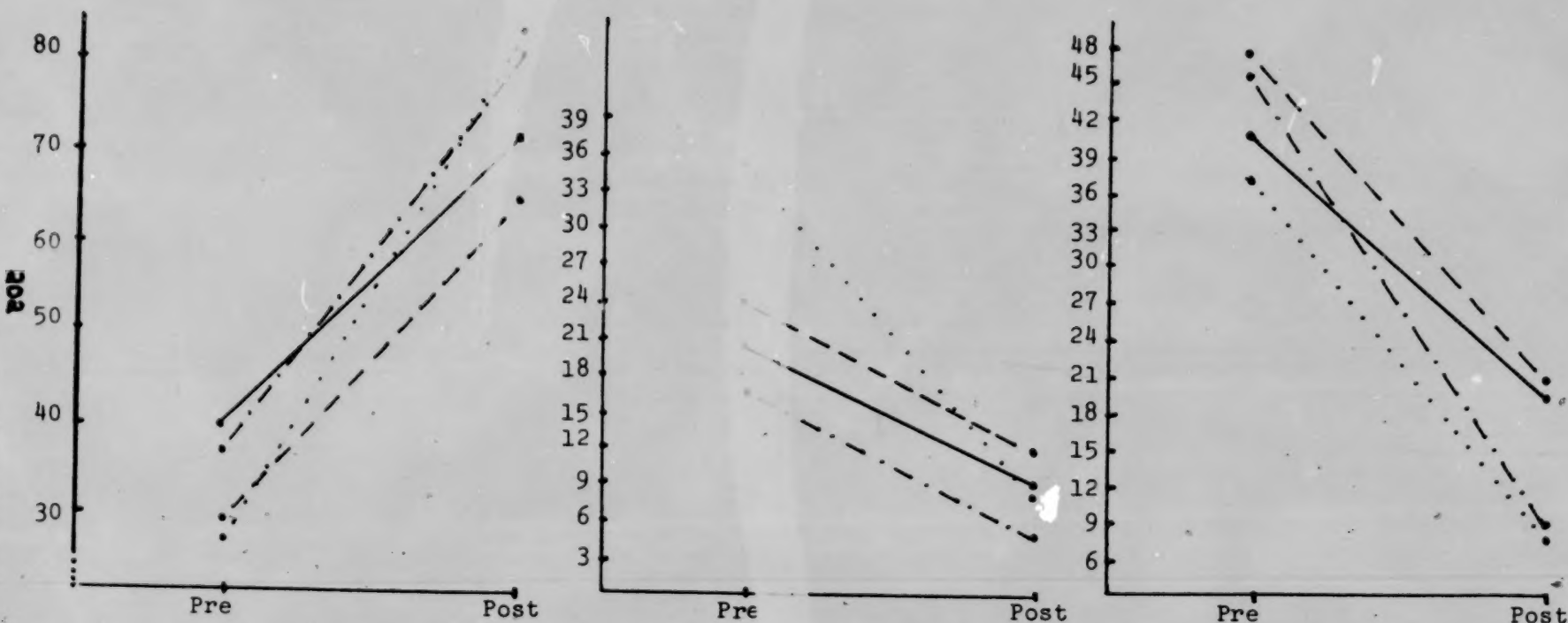


Figure 2: Percent Positive, "Not Sure" and Negative Attitudes Toward Teenage Drinking Scores Comparing Implementers with Non-Implementers by Sex Pre to Post.

% Positive

% "Not Sure"

% Negative



Implementers, male -.-.-.- (N=6)
 Implementers, female (N=1)
 Non-Implementers, male - - - - (N=25)
 Non-Implementers, female _____ (N=19)

Finally, Figure 3 depicts the percent positive, "not sure", and negative in their general attitudes toward drinking. Trainees started off very positive (68%), slightly unsure (11%) and a little negative (20%). Even with this high initial score, they became significantly more positive ($p < .001$) and less unsure ($p < .01$) and tended to become less negative ($p < .10$). Female trainees ended up with significantly more positive attitudes ($t = 2.20$; d.f. 76; $p < .05$) and tended to have less negative attitudes ($t = 1.73$; d.f. 67.17; $p < .10$).

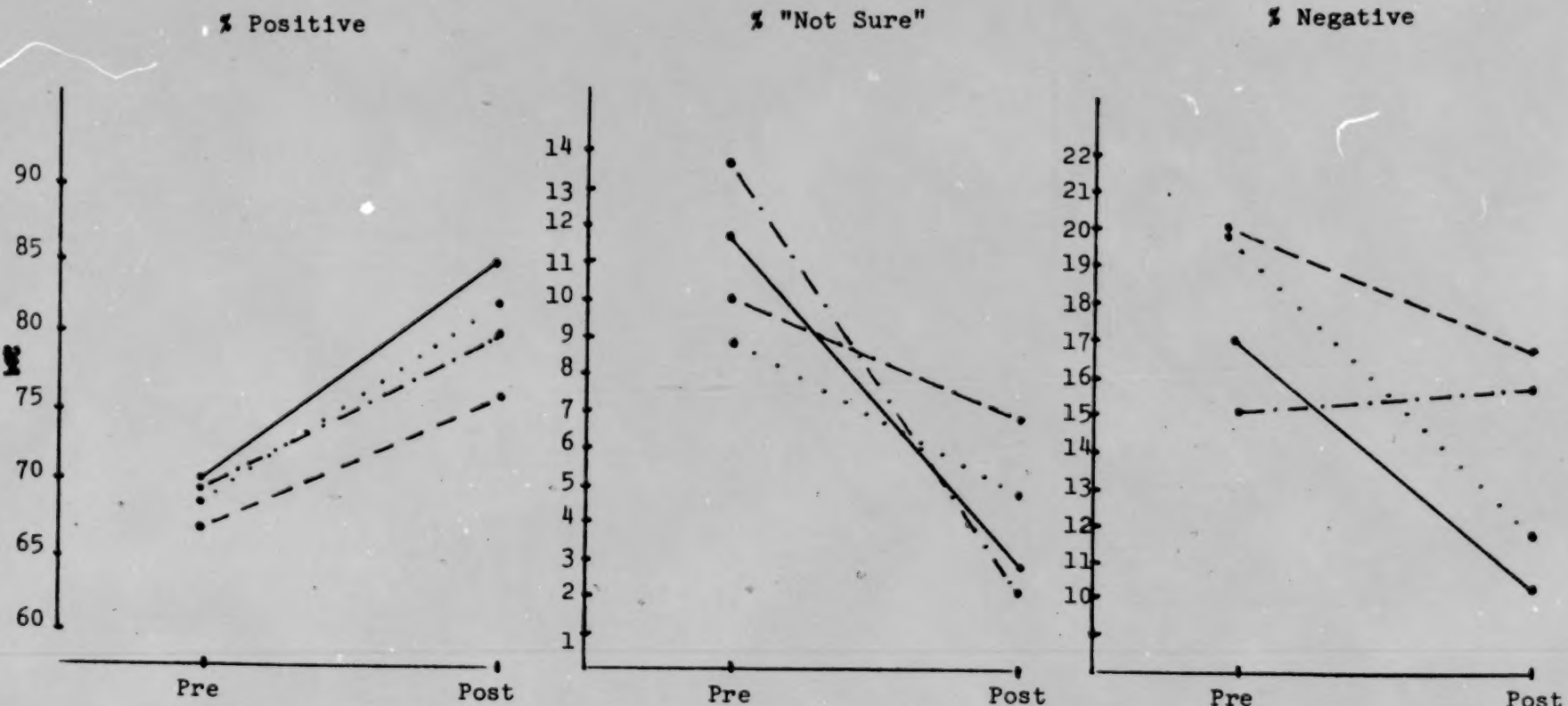
In sum, trainees became significantly more knowledgeable and more positive in their attitudes toward teenage drinking and drinking in general as a result of participation in the CASPAR training model. While most of the gain in knowledge (64%) was due to participants becoming less uncertain, most of their gain in positive attitudes toward teenage drinking (66%) was due to a change from their negative attitudes to positive ones. Female trainees gained most in knowledge and showed significantly more positive general drinking attitudes. Implementers began less knowledgeable and became significantly more certain in their knowledge. They also became significantly more positive in their attitudes toward teenage drinking. The implementation teachers, therefore, completed training slightly more knowledgeable and with slightly more positive general drinking attitudes and with significantly more positive attitudes toward teenage drinking.

Pre, Post and Delayed Post Changes

Figure 4 depicts the percent correct, "not sure", and incorrect knowledge scores comparing implementers with non-implementers across pre, post, Basic workshop and delayed post (July, 1977) questionnaires by sex. (See Appendix VIII for two-way repeated measures analyses of variance tables).¹ Although pre to delayed-post knowledge gains were significant ($p < .001$) there was a slight regression in correct scores from post to delayed post. On the delayed post implementers scored significantly higher than non-implementers ($t = 2.78$; d.f. 61; $p < .01$). Concerning "not sure" responses, implementers ended up significantly less uncertain than non-implementers ($t = 2.05$; d.f. 60.77; $p < .05$). Male implementers dropped significantly in incorrect scores (Scheffe: $p < .01$) while female non-implementers rose significantly (Scheffe: $p < .10$).

¹These analyses are based on 63 trainees. As is visible from the figures and tables, the basic patterns and findings for the 78 pre to post remain true for the 63. The attitude toward teenage drinking scores are different because they are based on a four-item scale instead of the five-item scale used pre to post. One item had inadvertently been omitted on the delayed post and the four item scale was used across all three time points for comparability purposes.

Figure: 3: Percent Positive, "Not Sure" and Negative General Drinking Attitude Scores Comparing Implementers with Non-Implementers by Sex Pre to Post.



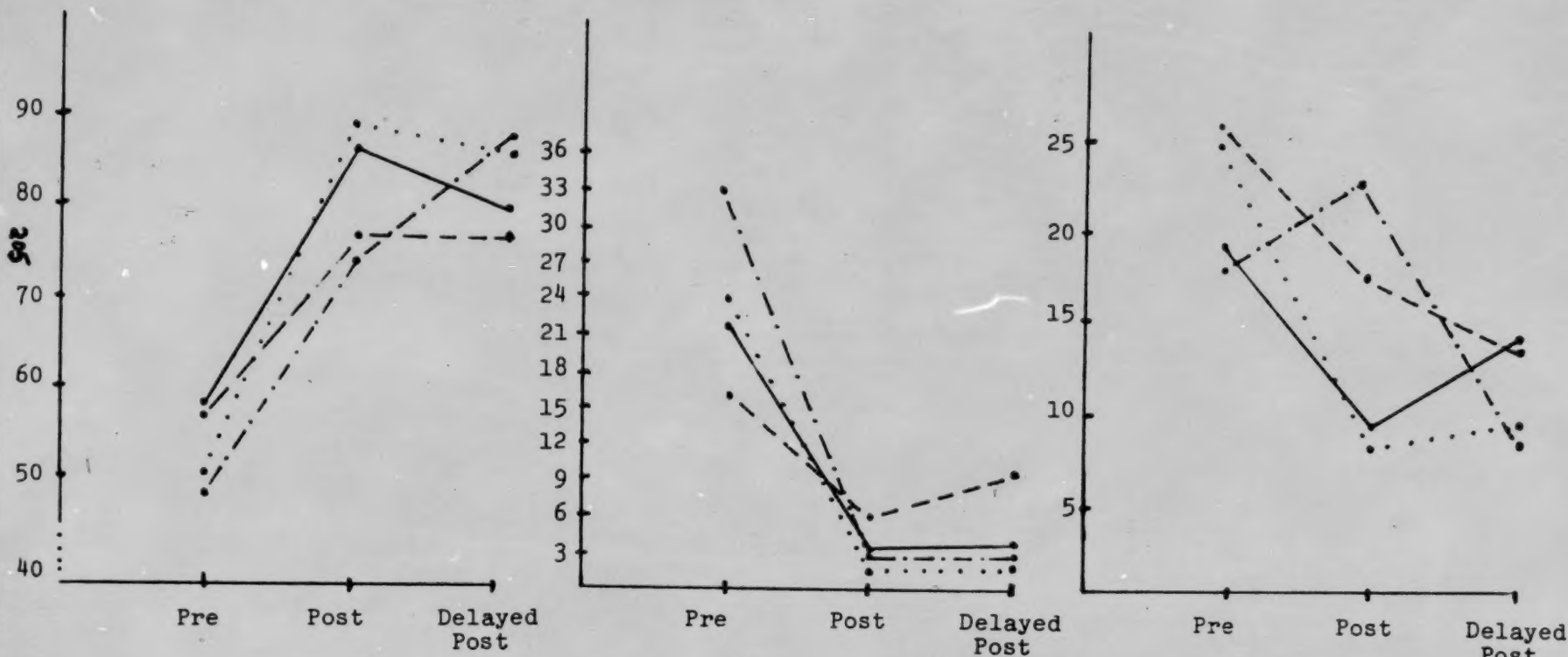
Implementers, male(N=6)
 Implementers, female.....(N=13)
 Non-Implementers, male(N=25)
 Non-Implementers, female.....(N=19)

Figure 4: Percent Correct, "Not Sure", and Incorrect Knowledge Scores Comparing Implementers with Non-Implementers by Sex Across Pre, Post, and Delayed-Post Tests.

% Correct

% "Not Sure"

% Incorrect



Implementers, male -.-.-.(N=6)
 Implementers, female.....(N=13)
 Non-Implementers, male -.-.-.(N=25)
 Non-Implementers, female_____(N=19)

Figure 5 depicts the percent positive, "not sure" and negative attitude toward teenage drinking scores. While overall gains from pre to delayed post remained significantly high ($p < .001$), there was a significant drop for all groups in positive scores (Scheffe: $p < .01$) from post to delayed post. However, while implementers increased significantly in "not sure" responses (Scheffe: $p < .10$) non-implementers increased significantly in negative responses (Scheffe: $p < .05$) on the delayed post. Implementers ended up significantly less negative on attitudes toward teenage drinking on the delayed post ($t = 3.26$; d.f. 58.85; $p < .01$) than non-implementers.

Finally, Figure 6 depicts the percent positive, "not sure", and negative scores for the General Drinking Attitudes. Similar to the Attitudes Toward Teenage Drinking, although overall gains from pre to delayed post remain significant ($p < .01$), there was a significant overall regression post to delayed post in positive scores (Scheffe: $p < .10$) and a significant increase in negative scores (Scheffe: $p < .05$). Non-implementers decreased significantly in positive scores (Scheffe: $p < .10$) and increased significantly in negative scores (Scheffe: $p < .10$).

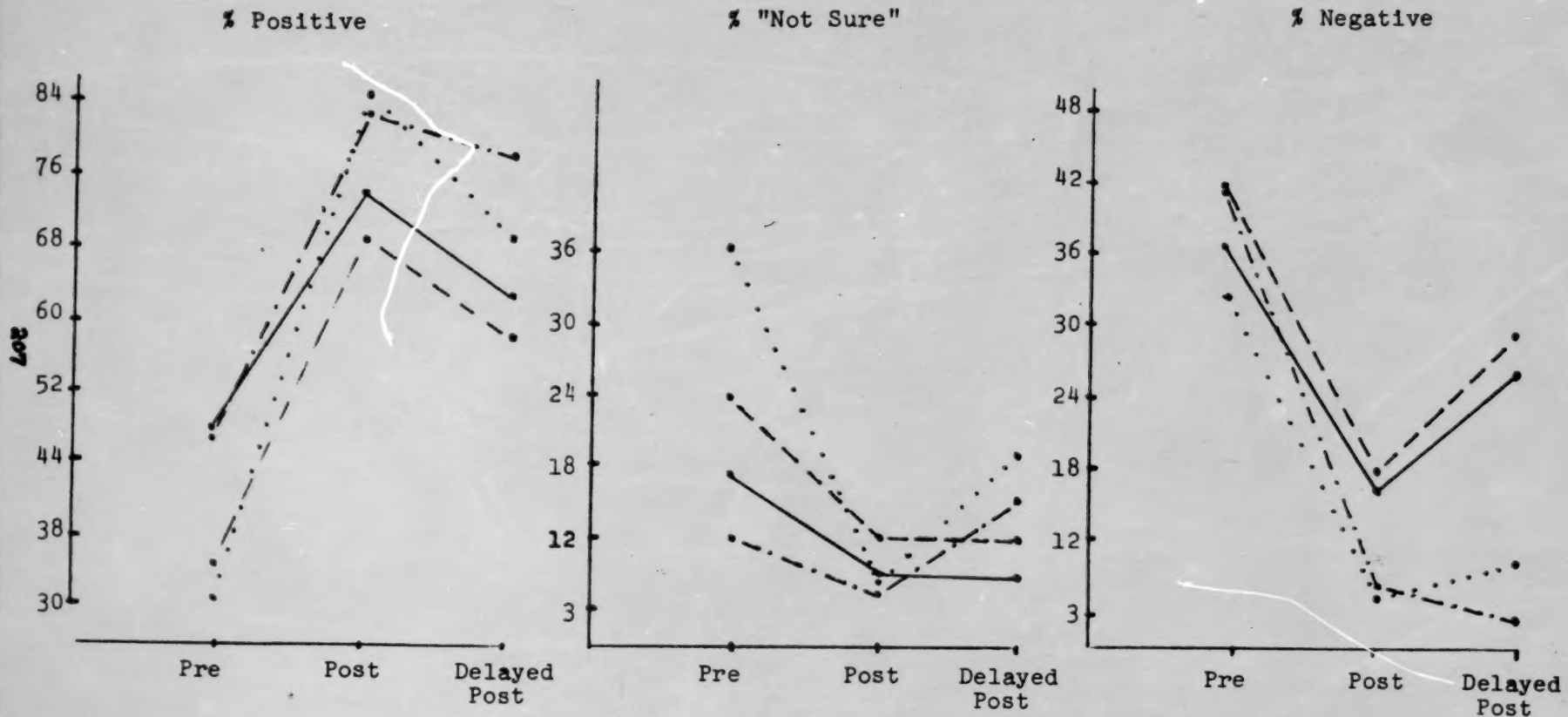
As shown in Table I, there remains a significant long term gain from pre to delayed post on all subscales. However, as expected there was a slight regression in knowledge post to delayed post and significant regression post to delayed post in positive scores on the attitude items. Both implementers and non-implementers became significantly less positive on attitudes toward teenage drinking but for implementers it was due to a significant increase in "not sure" responses while for non-implementers it was due to a significant increase in negative attitudes. In respect to General Drinking Attitudes, though both groups became less positive, only non-implementers became significantly less positive and significantly more negative post to delayed post.

Table I: Teacher Pre-Delayed Post Scores and Gains for all Subscales (N=63)

	<u>Pre</u>	<u>Delayed Post</u>	<u>Gain</u>	<u>p</u>
Knowledge	55.18	80.29	+25.11	<.001
Attitudes Toward Teenage Drinking	38.10	64.03	+25.93	<.001
General Drinking Attitudes	67.83	76.17	+ 8.34	<.01

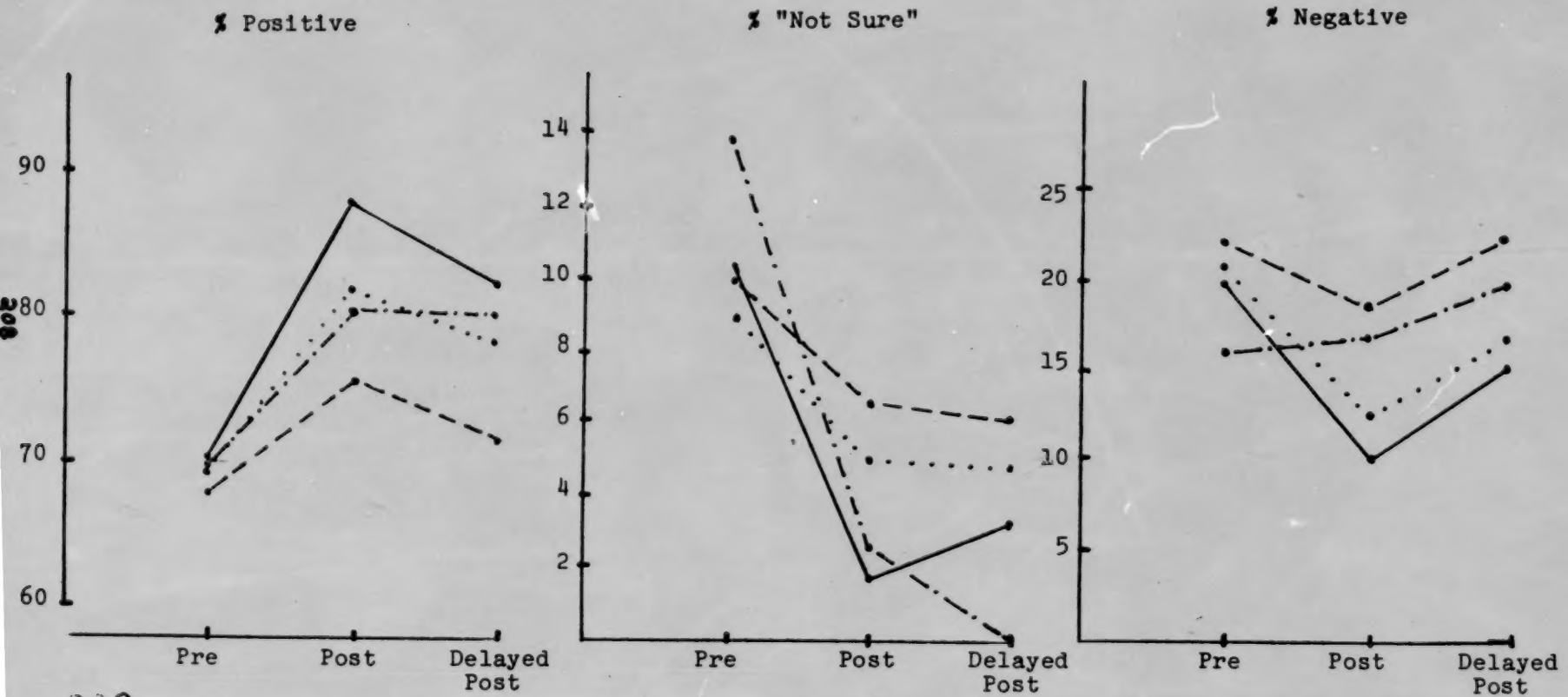
Because of the importance of attitude changes especially in relation to teenage drinking, the attitude toward teenage drinking subscale was further analyzed according to the following factors:

Figure 5: Percent Positive, "Not Sure", and Negative Attitudes Toward Teenage Drinking Scores Comparing Implementers with Non-Implementers by Sex Across Pre, Post, and Delayed Post Tests.



Implementers, male -.-.-.(N=6)
 Implementers, female.....(N=13)
 Non-Implementers, male -----(N=25)
 Non-Implementers, female _____(N=19)

Figure 6: Percent Positive, "Not Sure", and Negative General Drinking Attitude Scores Comparing Implementers with Non-Implementers by Sex Across Pre, Post, and Delayed Post Tests.



Implementers, male(N=6)
 Implementers, female.....(N=13)
 Non-Implementers, male(N=25)
 Non-Implementers, female(N=19)

1. amount of program exposure and teacher's sex;
2. client type;
3. school level;
4. type of subject taught;
5. friend or relative with a drinking problem; and,
6. reported frequency of having five or more drinks.

The analyses to be presented are based on combining the types of responses by giving the positive response two points, the "not sure" response one point, and the negative response zero points and transforming the scores to a 0 to 100 point scale so that a score of 100 equals the highest possible score and a score of 50 represents the middle or "not sure" point. This procedure offers a more synoptic picture of the data.

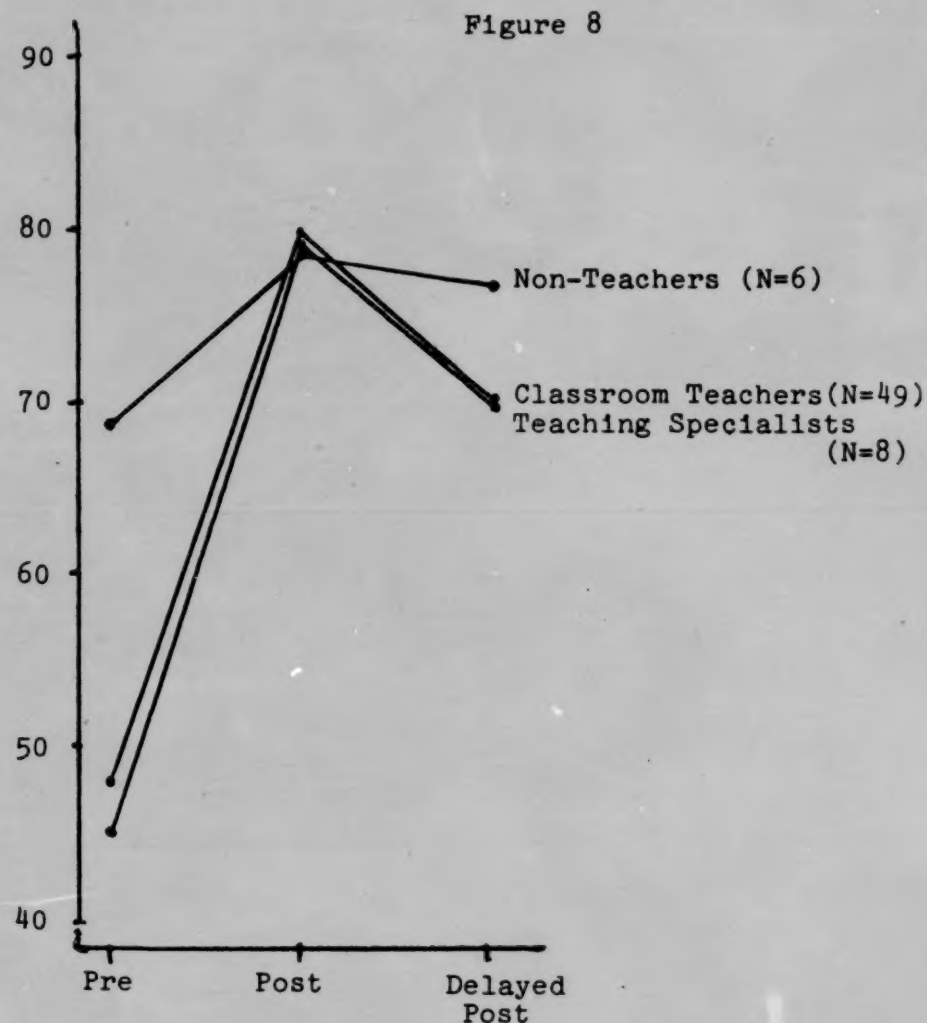
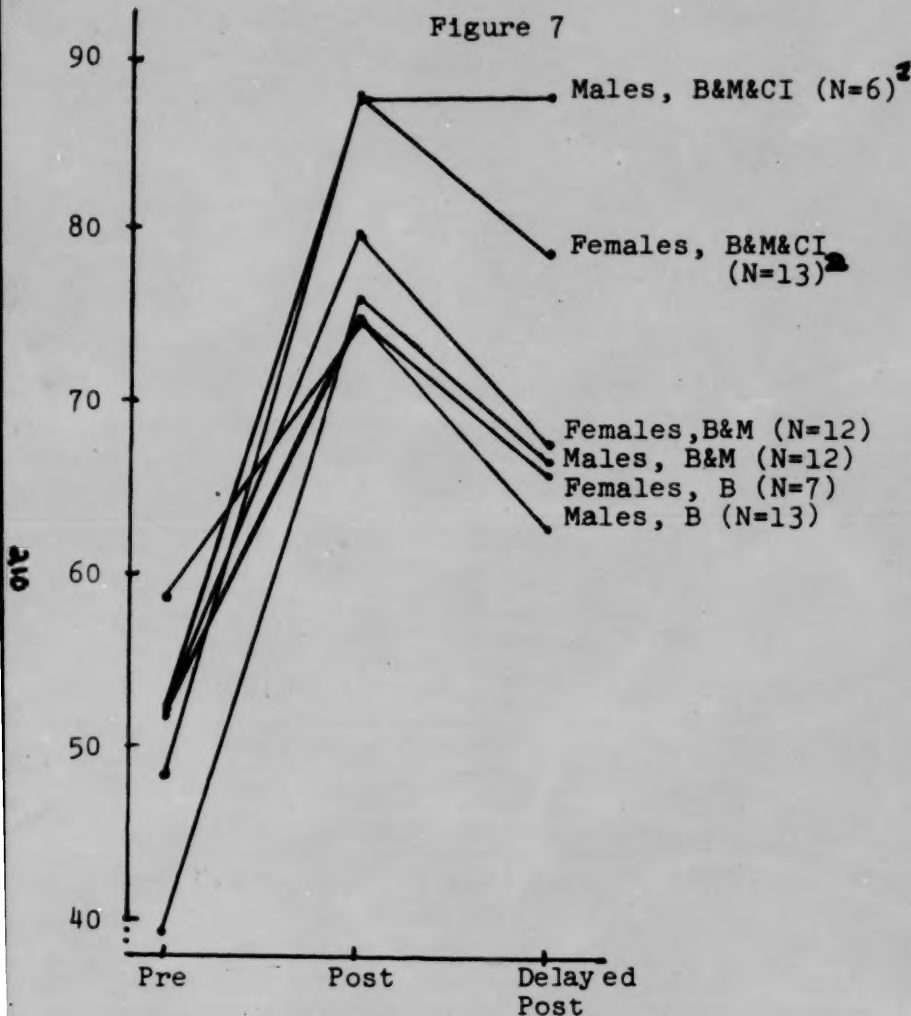
Figure 7 depicts the analysis of the attitude toward teenage drinking subscale according to amount of formal program exposure and teacher's sex.¹ As is observed from Figure 7, there was a general linear tendency ($p < .10$) for people with the higher scores on attitudes toward teenage drinking at the end of Basic training to go on to further formal program activities and those with more formal program exposure to remain higher at the delayed post-testing. Also, all groups regress post to delayed-post except male implementers who remain the same. Notwithstanding the post to delayed post regression, the more formal program exposure, the higher trainees' attitudes as a group tended to be at delayed post testing.

Figure 8 depicts the analysis of the attitude subscale according to client types. As is pictured in Figure 8, the non-teachers (nurses, librarians, administrators) start off higher and end up higher on the delayed post testing. Though they regress post to delayed post, on attitudes toward teenage drinking, regular classroom teachers and teacher specialists remain higher on the delayed post than they were on the pre test.

Figure 9 depicts the attitude subscale according to school level of trainees. As can be seen from the figure, junior high teacher trainees were higher on the post test and remained so on the delayed post test. Elementary and senior high trainees began different but ended up very similar by the delayed post. In general, then, the junior high trainees were highest on the post and the delayed post suggesting that the training tends to be more effective with this level.

¹The small size of some of the groups must be kept in mind when interpreting the results. Repeated measure analyses tables are in Appendix VIII.

Figures 7 & 8: Attitudes Toward Teenage Drinking Scores (Combined 0 to 100 Scale) on Pre, Post and Delayed Post Tests by Amount of Program Exposure and Sex (7) and by Client Type (8). (N=63)



226

B=Trained in Basic Workshop (20 hours)
M=Trained in Methods Workshop (20 hours)
CI=Implemented the Curriculum

1. One of the males did not take Methods
2. Four of the females did not take Methods

227

Figure 9

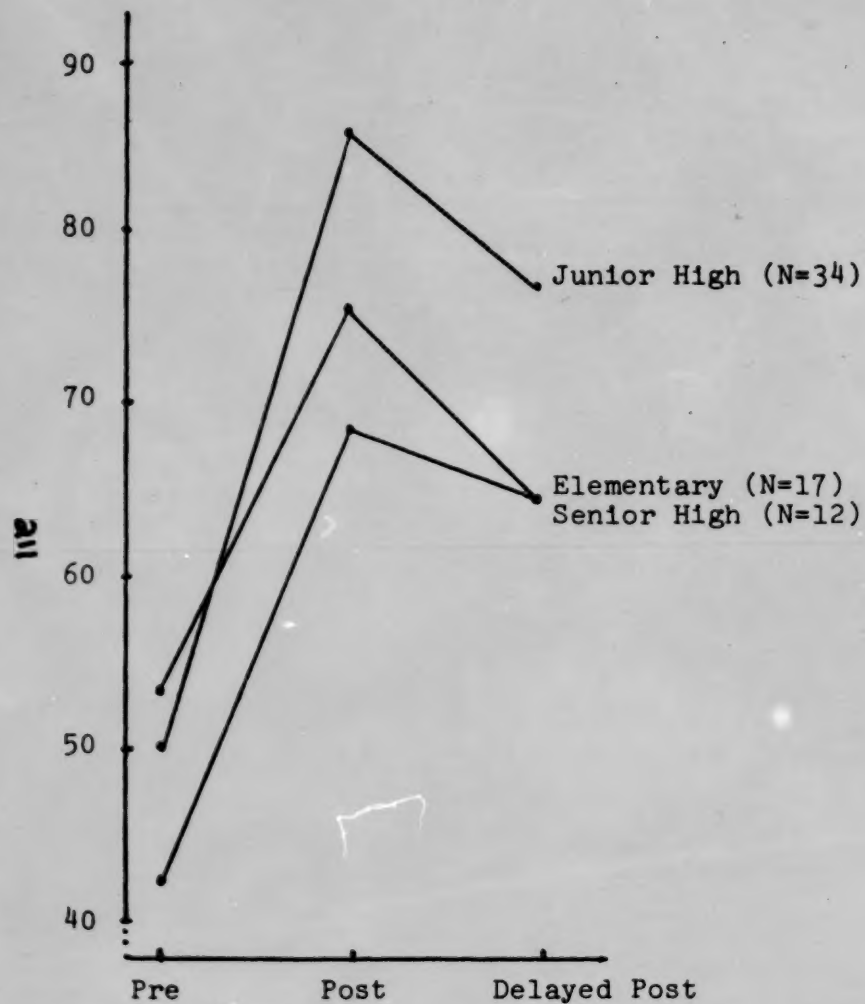
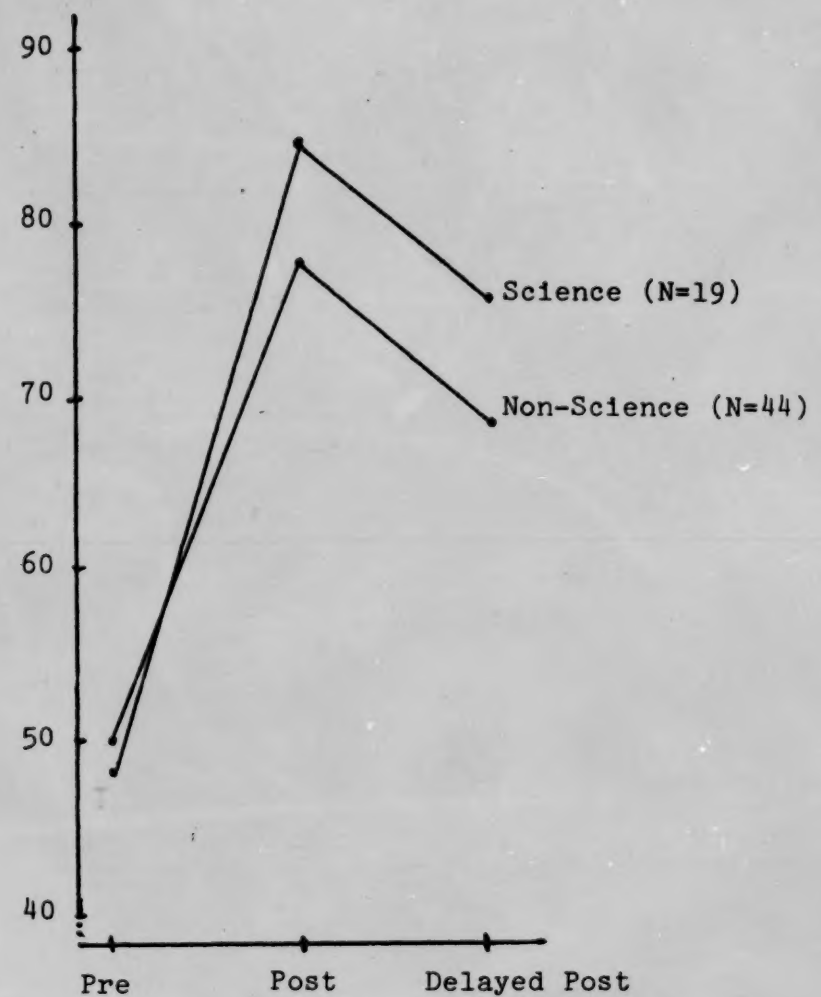


Figure 10



Figures 9 & 10: Attitudes Toward Teenage Drinking Scores (Combined 0 to 100 Scale) on Pre, Post, and Delayed Post Tests by School Level (9) and by Subject Taught (10). (N=63)

Figure 10 depicts the attitude subscale by subject taught, i.e., science, non-science. As can be seen from the figure, there are no significant differences between the groups; However, the science trainees tended to remain higher at delayed post testing. This tendency is important because the science teachers at the junior and senior high levels (specifically 7, 8, 12) are mandated by the Somerville school department to teach health education which includes alcohol education.

Figure 11 depicts the attitude subscale by the teacher's report of having a relative or friend with a drinking problem. Again, as can be observed, there are no significant differences between groups, however, the trainees who reported having both friends and relatives with a drinking problem tend to have the highest score on the delayed post test. Therefore, those trainees with the most reported personal contact with alcoholism tend to have the highest attitude toward teenage drinking score on the delayed post.

Finally, Figure 12 pictures the attitude subscale by the teacher's report of the frequency of five or more drinks they have per occasion. There is a tendency for trainees who report having five or more drinks once in a while to regress more than any other group ($p < .10$) on their attitudes toward teenage drinking. Trainees who report having five or more drinks less than half the time had the highest scores on the post and delayed post in relation to attitudes toward teenage drinking.

In sum, the further analyses did not find any significant differences within the factors examined for attitudes toward teenage drinking. However, the following two major observations were made about the attitudinal changes:

- (1) There appeared to be a general linear trend for trainees with more formal program exposure to do better on the Basic workshop post-test and to score higher on the attitude items on the delayed post-test.
- (2) There appeared to be more program success with the focal groups of junior high and science teachers.

As stated earlier there remained a significant long term gain from pre to delayed post on all subscales. Concerning the post-delayed-post regression, the following explanation is offered.

Previous research in the field of alcohol education predicts regression in knowledge and particularly attitude scores in relation to alcohol over time (see Williams, DiCicco and Unterberger, 1968). The reason given for this regression is that individuals' attitudes surrounding drinking are powerful, deeply embedded and often culturally determined and without repeated exposure to experiential learning situations accompanied by positive reinforcement, old feelings and prejudices will take over. Learning about alcohol is compared to learning about sexuality and respect for racial and ethnic differences in that all are seen as a re-education process which are described by Lewin and his associates (Lewin, 1951). As the present data demonstrates periodic efforts will need to be made to renew teachers' enthusiasm

Figure 11

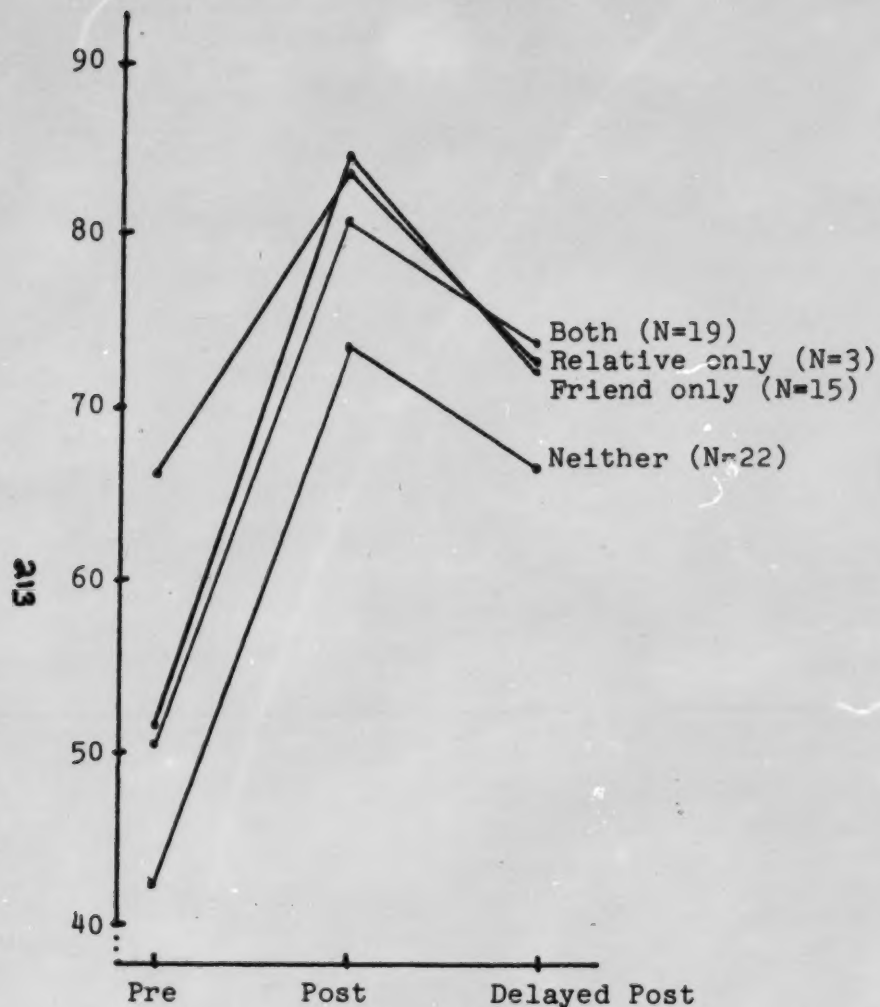
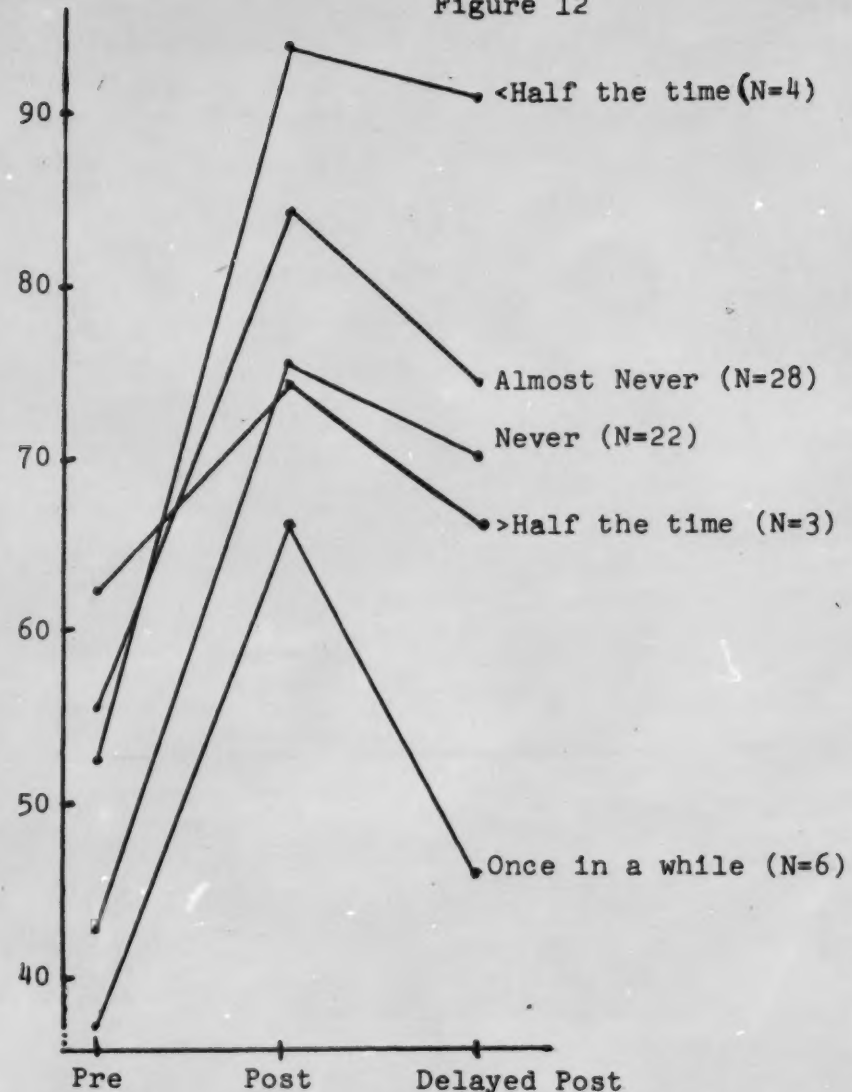


Figure 12



Figures 11 & 12: Attitudes Toward Teenage Drinking Scores (Combined 0 to 100 Scale) on Pre, Post, and Delayed Post Tests by Relative or Friend with a Drinking Problem (11) and by Frequency of 5 or More Drinks per Occasion (12) (N=63)

and competence for the task of teaching alcohol education each year. The question of how much reinforcement is needed before new attitudinal sets are truly incorporated remains an important area for further research.

Finally, on the delayed post-test teachers were also asked to indicate the approximate number of students they talked to outside of classroom discussions about alcohol related problems and the approximate number they referred during the '76-'77 school year.¹ Table II presents the percent of trainees according to types of alcohol related problems discussed, the number of students talked to about alcohol related problems and the number of students referred before and after workshops comparing implementation teachers with other trained junior and senior high teachers and all trainees. As can be seen from Table II, the percent of trainees who reported talking to students gained from pre to delayed-post while the percent who reported making referrals remained the same. Proportionally more implementation teachers reported talking to students on the delayed post than the other trained junior and senior high teachers particularly talking to students about alcohol problems in the family ($\chi^2 = 6.31$; d.f.1; $p < .02$), though proportionally fewer implementation teachers reported making referrals.² Also, proportionally more other junior and senior high teachers reported talking to students about alcohol related problems on the delayed post than trainees did on the pre-test demonstrating that the proportional increase in the number of trainees talking to students was not simply due to the curriculum implementation but also due to the training workshops.

¹Chapter VIII discusses the critical features aspect of these findings.

²Implementation teachers tended to underestimate the number of their referrals. See Chapter VIII.

Table II: Percent of Trainees According to Types of Alcohol Related Problems Discussed, the Number of Students Talked to About Alcohol Related Problems, and the Number of Students Referred Before and After Workshops Comparing Implementation Teachers with other Trained Junior and Senior High Teachers and all Trainees.

	Before Workshop (Pre-Test)		After Workshop (Summer '77 Follow-up)					
	All Trainees (N=77)		Other Junior & Senior High Teachers (N=20)		Implementation Teachers (N=19)		All Trainees (N=63)	
	N	%	N	%	N	%	N	%
1. <u>Type of problem discussed:</u>								
a. Student's own use of alcohol	18	23	8	40	9	47	23	38
b. A friend's use of alcohol	19	25	7	35	8	42	23	36
c. Alcohol problems in the student's family	22	29	7	35	15	79	33	51
2. <u>Number of Students talked to regarding alcohol problem:</u>								
None	33	43	9	45	2	11	23	37
1	6	8	0	0	1	5	2	3
2-3	18	23	4	20	7	37	13	1
4-5	10	13	1	5	2	11	8	13
6 or more	10	13	6	30	7	37	17	27
3. <u>Number of Referrals for help with alcohol-related problems:</u>								
None	60	78	14	70	14	74	48	76
1	7	9	1	5	2	11	5	8
2-3	8	11	3	15	3	16	8	13
4-5	1	1	1	5	0	0	2	3
6 or more	1	1	1	5	0	0	1	2

BIBLIOGRAPHY

- Ausubel, D. and Fitzgerald, D. "Organizer, General Background, and Antecedent Learning Variables in Sequential Verbal Learning" Journal of Educational Psychology. 53, 243-249, 1962.
- Bandura, A. Psychological Modeling: Conflicting Theories. New York, Lieber-Atherton, 1974.
- Bock, R. Multivariate Statistical Methods in Behavioral Research. New York, McGraw-Hill, 1975.
- Bond, A. An Experiment in the Teaching of Genetics. New York, Teachers College Press, 1940.
- Cochran, W. Sampling Techniques. New York, John Wiley and Sons, 1963.
- Coombs, C. A Theory of Data. New York, John Wiley and Sons, 1964.
- Carifio, J. and Biron, R. "Collecting Sensitive Data Anonymously: The CDRGP Technique" Journal of Alcohol and Drug Education, Winter, 1978.
- Carifio, J. Some Findings on Cronbach's Alpha. Paper to be presented at the 1978 meeting of the New England Educational Research Association.
- DiCicco, L. and Unterberger, H. "Cultural and Professional Avoidance: A Dilemma in Alcoholism Training" Journal of Alcohol and Drug Education. Vol.22, No.2, pp.28-38, 1977.
- DiCicco, L. and Unterberger, H. "Does Alcohol Follow Drugs?" Bulletin of the National Association of Secondary School Principals. Vol.57, No. 732, April, 1973.
- Deutsch, C. The Surprise in Pandora's Box: Teachers Help Children with Family Alcoholism (submitted for publication).
- Ellis, H. The Transfer of Learning. New York, MacMillan, 1965.
- Garner, W. The Processing of Information and Structure, New York, John Wiley and Sons, 1974.
- Gibson, E. Principles of Perceptual Learning and Development. Englewoods Cliffs, New Jersey, Prentice Hall, 1969.
- Glass, G. "Primary, Secondary, and Meta-Analysis of Research" Educational Researcher, Vol. 10, No.5, 3-9, November, 1976.
- Hacking, I. The Logic of Statistic Inference. Cambridge University Press, 1965.
- Harris, C. (Ed.) Problems in Measuring Change. Madison, Wisc., University of Wisconsin Press, 1967.

- Hartigan, J. Clustering Algorithms. New York, John Wiley and Sons, 1975.
- Held, R. and Whitman, R. (Eds.) Perception: Mechanisms and Models. San Francisco, W.H. Freeman and Company, 1976.
- Hively, W. "Domain-Referenced Testing" Project Minne-Mast. University of Minnesota, Fall, 1972.
- Johnson, T. "Program and Product Evaluation from a Domain-Referenced Viewpoint" Educational Technology. 43-48, June, 1974.
- Kaufman, A. The Theory of Fuzzy Sets. New York, Academic Press, 1975.
- Keppel, G. Design and Analysis: A Researcher's Handbook. New York, Prentice Hall, 1973.
- Lewin, K. Field Theory in Social Science. New York, Harper, 1951.
- Lynch, M. and Stackwell, P. Sex-Role Stereotyping...Some Findings. Paper presented at the 1976 meeting of the American Educational Research Association.
- Mullins, E. and Rosen, D. Probability Theory and Calculus. New York, Bogden and Quigley, Inc., 1971.
- Neisser, U. Cognitive Psychology. Englewoods Cliffs, N.J., Prentice Hall, 1967.
- Neisser, U. Cognition and Reality: Principles and Implications of Cognitive Psychology. San Francisco, W.H. Freeman and Company, 1976.
- Norman, D. Memory and Attention: An Introduction to Human Information Processing. New York, John Wiley and Sons, 1976.
- Nunnally, J. Psychometric Theory. New York, McGraw-Hill, 1967.
- Plaut, T. (Editor) Alcohol Problems - A Report to the Nation. Cooperative Commission on the Study of Alcoholism. New York, Oxford University Press, 1967.
- Richards, J.M., Jr. "A Simulation Study of the Use of Change Measures to Compare Educational Programs" American Educational Research Journal. 12:3, 299-311, Summer, 1975.
- Rosenzweig, M. and Bennet E. (Eds.) Neural Mechanisms of Learning and Memory. Cambridge, Mass., MIT Press, 1976.
- Rozeboom, W. Foundations of the Theory of Prediction. Homewood, Ill., The Dorsey Press, 1966.
- Suppes, D. The Structure of Scientific Theories. New York, Academic Press, 1975.

Tobias, S. "Sequence, Familiarity, and Attribute by Treatment Interactions in Programmed Instruction" Journal of Educational Psychology. 62:2, 133-141; 1973.

Unterberger, H. and DiCicco, L. "Alcohol Education Re-evaluated" Bulletin of the National Association of Secondary School Principals. 52, 15-29; 1968.

Warren, S. Belief and Career Myths. Paper presented at the 1975 meeting of the American Mental Retardation Association.

Wicks, J. and Beggs, D. Evaluation for Decision-Making in Schools. Boston, Houghton-Mifflin, 1971.

Williams, A., DiCicco, D. and Unterberger, H. "Philosophy and Evaluation of an Alcohol Education Program" Journal of Studies on Alcohol. 29:3, 685-702; 1968.

Wilson, R. Introduction to Graph Theory. Edinburgh, Oliver and Boyd, 1972.

Wohlwill, J. The Study of Behavioral Development. New York, Academic Press, 1973.

APPENDIX I

**Curriculum Implementation
and Teacher Workshop
Instruments**

PRE-POST TEST CYCLE 1

NAME _____

DATE _____

PERIOD _____

CASPAR Drinking Quiz

This is not a test! You will not be given a mark. This quiz is to find out what people in the class are thinking about alcohol and alcoholism. For each statement, circle A if you agree with it, D if you disagree, and ? if you don't know or are undecided.

- A D ? 1. If a person is drunk, coffee can help him or her sober up.
- A D ? 2. A bottle of beer has the same amount of alcohol as a shot of whiskey.
- A D ? 3. A drink can help most people drive better.
- A D ? 4. A good reason for drinking is to help a person forget problems and hassles.
- A D ? 5. Parties aren't any fun unless I drink.
- A D ? 6. Drinking makes me feel tough and cool.
- A D ? 7. A little wine or beer can make a meal more enjoyable.
- A D ? 8. Most people drink alcohol to get drunk.
- A D ? 9. Teenagers should never drink.
- A D ? 10. Most alcoholics are poor old men who live on the streets.
- A D ? 11. Alcoholics drink every day.
- A D ? 12. If you drink only beer, you can't become an alcoholic.
- A D ? 13. Alcoholics who get help at hospitals and AA can get better and stop drinking.
- A D ? 14. Alateen is for children whose parents have a drinking problem.
- A D ? 15. Teenagers can make responsible decisions about drinking.
- A D ? 16. Kids who don't drink are no fun.
- A D ? 17. It is worse for a girl to drink than it is for a boy.
- A D ? 18. I know a lot of people who drink too much.
- A D ? 19. I may decide to drink a little now and then if I want to.

20. Situation - You have invited a new friend to your house. No one is at home. Your friend suggests you have a party with the beer in the refrigerator. Your parents usually let you have some beer when they are around. What would you do?

Complete the sentence

1. Drinking is _____.
2. Drinking is O.K. when _____.
3. Drinking is not O.K. _____.
4. Alcoholism is _____.
5. Alcoholics are _____.

Have you learned about alcohol and alcoholism before?

Please circle either yes or no.

NO	YES	in school
NO	YES	at home
NO	YES	from friends
NO	YES	from a CASPAR peer leader
NO	YES	at summer camp
NO	YES	other _____

Have you heard of CASPAR before?

Please circle either yes or no.

NO	YES	in school
NO	YES	at home
NO	YES	from friends
NO	YES	from a CASPAR peer leader
NO	YES	at summer camp
NO	YES	other _____

PRE-POST TEST CYCLE 2 JUNIOR HIGH

CASPAR

NAME _____

DATE _____

PERIOD _____

CASPAR Drinking Quiz

This is not a test! You will not be given a mark. This quiz is to find out what people in the class are thinking about alcohol and alcoholism. For each statement, circle A if you agree with it, D if you disagree, and ? if you don't know or are undecided.

- A D ? 1. If a person is drunk, coffee can help him or her sober up.
- A D ? 2. A bottle of beer has the same amount of alcohol as a shot of whiskey.
- A D ? 3. A drink can help most people drive better.
- A D ? 4. A good reason for drinking is to help a person forget problems and hassles.
- A D ? 5. Parties aren't any fun unless I drink.
- A D ? 6. Drinking makes me feel tough and cool.
- A D ? 7. A little wine or beer can make a meal more enjoyable.
- A D ? 8. Most people drink alcohol to get drunk.
- A D ? 9. Teenagers should never drink.
- A D ? 10. Most alcoholics are poor old men who live on the streets.
- A D ? 11. Alcoholics drink every day.
- A D ? 12. If you drink only beer, you can't become an alcoholic.
- A D ? 13. Alcoholics who get help at hospitals and AA can get better and stop drinking.
- A D ? 14. Alateen is for children whose parents have a drinking problem.
- A D ? 15. Teenagers can make responsible decisions about drinking.
- A D ? 16. Kids who don't drink are no fun.
- A D ? 17. It is worse for a girl to drink than it is for a boy.
- A D ? 18. I know a lot of people who drink too much.
- A D ? 19. I may decide to drink a little now and then if I want to.

20. Circle the number of the best response for the following situation: You have invited a new friend to your house. No one is at home. Your friend suggests you have a party with the beer in the refrigerator. Your parents usually let you have some beer when they are around. What would you do?
1. Talk to your friend and explain why not.
 2. Ask your friend to leave.
 3. Take your chances and have some.
 4. Let your friend have one but tell him you don't want any.
 5. Tell him to wait til your parents come home.
21. Below are reasons people give for drinking alcohol. Circle the number of any reason(s) you think is an O.K. reason that does not get people into trouble.
1. to loosen-up at a party
 2. to get drunk
 3. to forget or escape from problems
 4. to celebrate
 5. there are no good reasons
22. Below are reasons people give for drinking alcohol. Circle the number of any reason(s) you think is a not-O.K. reason that might get people into trouble.
1. to get drunk
 2. to relax after a long day
 3. to forget or escape from problems
 4. because there's nothing else to do
 5. there are no bad reasons
23. Circle the number of the phrase that best completes this sentence: In general, I would say drinking is
1. for adults, not children.
 2. something to stay away from.
 3. a good way to feel better when you're down.
 4. O.K. if you don't overdo it.
 5. dynamite.
24. Circle the number of the phrase that best completes this sentence: In general, I would say alcoholism is
1. a hopeless problem.
 2. something people with no willpower bring on themselves.
 3. the same as drunkenness.
 4. an illness which can be treated.
 5. when someone needs a drink all the time.

26. In the last two years, have you seen or talked to a CASPAR Peer Leader(s)? Circle the number of the best response.

1. Yes
2. Not sure, but heard of them
3. Don't know what a CASPAR Peer Leader is
4. No

27. If you have met a CASPAR Peer Leader(s) in the last two years, circle the number for each way you have seen or talked to him or her.

1. Study-hall CASPAR Rap Groups
2. After-School CASPAR Rap Groups
3. Demonstration or other activities in class
4. Talking in cafeteria, halls, etc.
5. SYEP/NYC summer workshops
6. As a friend
7. Other (explain): _____

28. In the last two years, has one of your teachers held a class about alcohol? Circle the number of the best response.

- | | |
|---------------------------|---------------------------------|
| 1. Yes | 3. Not sure, but don't think so |
| 2. Not sure, but think so | 4. No |
| | 5. Can't remember |

29. If one or more of your teachers held classes about alcohol in the last two years, please write his or her name and state the number of classes you had.

DATE _____

PERIOD _____

CASPAR Drinking Quiz

This is not a test! You will not be given a mark. This quiz is to find out what people in the class are thinking about alcohol and alcoholism. For each statement, circle A if you agree with it, D if you disagree, and ? if you don't know or are undecided.

- A D ? 1. If a person is drunk, coffee can help him or her sober up.
- A D ? 2. A bottle of beer has the same amount of alcohol as a shot of whiskey.
- A D ? 3. Alcohol is a depressant or downer.
- A D ? 4. A good reason for drinking is to help a person feel less nervous and shy on a date.
- A D ? 5. Parties aren't any fun unless I drink.
- A D ? 6. Kids who don't drink are no fun.
- A D ? 7. A little wine or beer can make a meal more enjoyable.
- A D ? 8. Most people drink alcohol to get drunk.
- A D ? 9. Someone who has a drink most every day can still be a responsible drinker.
- A D ? 10. Alcohol in any quantity will damage organs in the human body, like the brain, liver or stomach.
- A D ? 11. Almost all alcoholics drink every day.
- A D ? 12. A person can overdose on alcohol.
- A D ? 13. Combining a drink or two with a few downs is no more dangerous than having a few drinks.
- A D ? 14. Alateen is for children whose parents have a drinking problem.
- A D ? 15. Teenagers can make responsible decisions about drinking.
- A D ? 16. Parents should not drink in front of their children or let them drink in the home.
- A D ? 17. It is worse for a girl to drink than it is for a boy.
- A D ? 18. I know a lot of people who drink too much.
- A D ? 19. Most alcoholics can stop drinking if they really put their mind to it.
- A D ? 20. As long as a person keeps out of trouble, it's all right for him or her to drink to excess.

- U
21. Circle the number of the best response for the following situation:
The party is breaking up, it's late, and the kid who drove you over has had a lot to drink. He is drunk but he insists he can drive. It's too far to walk so you ask around for a ride, but no one else is going your way. You know your parents are sleeping and you don't have much money. You decide to:
1. Take your chances and ride with the kid.
 2. Call your parents and ask them to pick you up.
 3. Borrow money to take a cab.
 4. Ask someone if you can stay at his or her house.
 5. Get the kid to walk around the block so he'll be sober enough to drive.
22. Below are reasons people give for drinking alcohol. Circle the number of any reason(s) you think is an O.K. reason that does not get people into trouble.
1. to loosen-up at a party
 2. to get drunk
 3. to forget or escape from problems
 4. to celebrate
 5. there are no good reasons
23. Below are reasons people give for drinking alcohol. Circle the number of any reason(s) you think is a not-O.K. reason that might get people into trouble.
1. to get drunk
 2. to relax after a long day
 3. to forget or escape from problems
 4. because there's nothing else to do
 5. there are no bad reasons
24. Circle the number of the phrase that best completes this sentence:
In general, I would say drinking is
1. for adults, not children.
 2. something to stay away from.
 3. a good way to feel better when you're down.
 4. O.K. if you don't overdo it.
 5. dynamite.
25. Circle the number of the phrase that best completes this sentence:
In general, I would say alcoholism is
1. a hopeless problem.
 2. something people with no willpower bring on themselves.
 3. the same as drunkenness.
 4. an illness which can be treated.
 5. when someone needs a drink all the time.

26. In the last two years, have you seen or talked to a CASPAR Peer Leader(s)? Circle the number of the best response.

1. Yes
2. Not sure, but heard of them
3. Don't know what a CASPAR Peer Leader is
4. No

27. If you have met a CASPAR Peer Leader(s) in the last two years, circle the number for each way you have seen or talked to him or her.

1. Study-hall CASPAR Rap Groups
2. After-School CASPAR Rap Groups
3. Demonstration or other activities in class
4. Talking in cafeteria, halls, etc.
5. SYEP/NYC summer workshops
6. As a friend
7. Other (explain): _____

28. In the last two years, has one of your teachers held a class about alcohol? Circle the number of the best response.

- | | |
|---------------------------|---------------------------------|
| 1. Yes | 3. Not sure, but don't think so |
| 2. Not sure, but think so | 4. No |
| | 5. Can't remember |

29. If one or more of your teachers held classes about alcohol in the last two years, please write his or her name and state the number of classes you had.

PRE-POST TEST CYCLE 3

DATE: / /

PERIOD:

Directions: To create your own CASPAR CODE NAME, please read each rule carefully and print the correct letter for each on the left-hand line.

PLEASE PRINT CLEARLY AND IN CAPITAL LETTERS

- First letter of your middle name (if no middle name, write "z")
- First letter of month you were born in
- First letter of your sex: Male or Female
- First letter of the name of your street
- First letter of your mother's first name (if unknown, write "x")

CASPAR Drinking Quiz

This quiz is to find out what people in the class are thinking about alcohol and alcoholism. The quiz is not a test and you will not be given a mark on it. For each statement, circle A if you agree with it, D if you disagree, and ? if you don't know or are undecided.

- A D ? 1. A 12 oz. bottle of beer has the same amount of alcohol as a shot of whiskey.
- A D ? 2. If a person is drunk, coffee can help him or her sober up.
- A D ? 3. There are times it's O.K. for teenagers to have a drink.
- A D ? 4. It is worse for a girl to drink than it is for a boy.
- A D ? 5. As long as a person keeps out of trouble, it's all right for him or her to drink too much.
- A D ? 6. For many people, a little wine or beer makes a meal more enjoyable.
- A D ? 7. If someone close has a drinking problem it's best for you to tell someone you trust about it.
- A D ? 8. Most alcoholics are poor old men who live on the streets.
- A D ? 9. A person can have a drink everyday and be a responsible drinker.
- A D ? 10. Parents should not drink in front of their children or let their children drink in the home.



- A D ? 11. If a person has a drink two or three times a week, his or her brain, liver or stomach will probably be damaged.
- A D ? 12. Alcohol will affect you less after a meal than before a meal.
- A D ? 13. A good reason for drinking is to help a person forget problems and hassles.
- A D ? 14. Alateen is for children whose parents have a drinking problem.
- A D ? 15. A good reason for drinking is to help a person feel less nervous and shy on a date.
- A D ? 16. If someone is worried about a parent's drinking, that parent is probably an alcoholic.
- A D ? 17. People who don't drink are afraid to enjoy themselves.
- A D ? 18. The same amount of alcohol will usually affect a 100 pound person more than a 150 pound person.
- A D ? 19. Parents should show their disapproval everytime their son or daughter drinks too much.
- A D ? 20. If you drink only beer, you can't become an alcoholic.
- A D ? 21. I know some people who drink a lot.

22. Situation: You have invited a new friend to your house. No one is at home. Your friend suggests you have a party with the beer in the refrigerator. Your parents usually let you have some beer when they are around. What would you do and why?

23. An O.K. reason for drinking alcohol that does not get people into trouble is _____

24. A not-O.K. reason for drinking alcohol that might get people into trouble is _____

25. In general, I would say drinking is _____

26. In the last two years, have you seen or talked to a CASPAR Peer Leader(s)? Circle the number of the best response.

1. Yes
2. Not sure, but heard of them
3. Don't know what a CASPAR Peer Leader is
4. No

27. If you have met a CASPAR Peer Leader(s) in the last two years, circle the number for each way you have seen or talked to him or her.

1. Study-hall CASPAR Rap Groups
2. After-School CASPAR Rap Groups
3. Demonstration or other activities in class
4. Talking in cafeteria, halls, etc.
5. SYEP/NYC summer workshops
6. As a friend
7. Other (explain): _____

28. In the last two years, has one of your teachers held a class about alcohol? Circle the number of the best response.

- | | |
|---------------------------|---------------------------------|
| 1. Yes | 3. Not sure, but don't think so |
| 2. Not sure, but think so | 4. No |
| | 5. Can't remember |

29. If one or more of your teachers held classes about alcohol in the last two years, please write his or her name and state the number of classes you had.

PRE-POST TEST CYCLE 4

DATE: / /

PERIOD: _____

Directions: To create your CODE NAME, please read each rule carefully and print the correct letter for each on the left-hand line.

PLEASE PRINT CLEARLY AND IN CAPITAL LETTERS

____ First letter of your middle name (if no middle name, write "z")

____ First letter of month you were born in

____ First letter of your sex: Male or Female

____ First letter of the name of your street

____ First letter of your mother's first name (if unknown, write "x")

The quiz is not a test and you will not be given a mark on it. This quiz is to find out what people in the class are thinking about alcohol and alcoholism. For each statement, circle A if you agree with it, D if you disagree, and ? if you don't know or are undecided.

- A D ? 1. A 12 ounce bottle of beer has the same amount of alcohol as a 1½ ounce shot of whiskey.
- A D ? 2. If a person is drunk, coffee can help him or her sober up.
- A D ? 3. There are times it's O.K. for teenagers to have a drink.
- A D ? 4. The same amount of alcohol will usually affect a 100 pound person more than a 150 pound person.
- A D ? 5. As long as a person keeps out of trouble, it's all right for that person to drink as much as he or she wishes.
- A D ? 6. Parents should not drink in front of their children or let their children drink in the home.
- A D ? 7. A good reason for drinking is to help a person forget problems and hassles.
- A D ? 8. There is nothing wrong with having a little wine or beer with a meal to make the meal more enjoyable.
- A D ? 9. A person can have a drink everyday and be a responsible drinker.
- A D ? 10. If you drink only beer, you can't become an alcoholic.
- A D ? 11. Parents should show their disapproval everytime their son or daughter drinks too much.
- A D ? 12. A good reason for drinking is to help a person feel less nervous and shy on a date.

- A D ? 13. Most alcoholics are poor old men who live on the streets.
- A D ? 14. Alateen is for children whose parents have a drinking problem.
- A D ? 15. Alcohol will affect you less after a meal than before a meal.
- A D ? 16. Normally, when people drink, they tend to lose their physical co-ordination before they lose their judgement or concentration.
- A D ? 17. If a person has a drink two or three times a week, that person's brain, liver or stomach will probably be damaged.
- A D ? 18. People who don't drink are most likely afraid to enjoy themselves.
- A D ? 19. If someone close to you has a drinking problem it's best to tell someone you trust about it.
- A D ? 20. It is worse for a girl to drink than it is for a boy.
- A D ? 21. I know some people who drink a lot.

22. Situation: You have invited a new friend to your house. No one is at home. Your friend suggests you have a party with the beer in the refrigerator. Your parents usually let you have some beer when they are around. What would you do and why?

23. An O.K. reason for drinking alcohol that does not get people into trouble is _____

24. A not-O.K. reason for drinking alcohol that might get people into trouble is _____

25. In general, I would say drinking is _____

26. In the last two years, have you seen or talked to a CASPAR Peer Leader(s)? Circle the number of the best response.

1. Yes
2. Not sure, but heard of them
3. Don't know what a CASPAR Peer Leader is
4. No

27. If you have met a CASPAR Peer Leader(s) in the last two years, circle the number for each way you have seen or talked to him or her.

1. Study-hall CASPAR Rap Groups
2. After-School CASPAR Rap Groups
3. Demonstration or other activities in class
4. Talking in cafeteria, halls, etc.
5. SYEP/NYC summer workshops
6. As a friend
7. Other (explain): _____

28. In the last two years, has one of your teachers held a class about alcohol? Circle the number of the best response.

- | | |
|---------------------------|---------------------------------|
| 1. Yes | 3. Not sure, but don't think so |
| 2. Not sure, but think so | 4. No |
| | 5. Can't remember |

29. If one or more of your teachers held classes about alcohol in the last two years, please write his or her name and state the number of classes you had.

PRE-POST TEST COMPARISON COMMUNITY

DATE: / /

PERIOD:

Directions: To create your CODE NAME, please read each rule carefully and print the correct letter for each on the left-hand line.

PLEASE PRINT CLEARLY AND IN CAPITAL LETTERS

- First letter of your middle name (if no middle name, write "z")
- First letter of month you were born in
- First letter of your sex: Male or Female
- First letter of the name of your street
- First letter of your mother's first name (if unknown, write "x")

The quiz is not a test and you will not be given a mark on it. This quiz is to find out what people in the class are thinking about alcohol and alcoholism. For each statement, circle A if you agree with it, D if you disagree, and ? if you don't know or are undecided.

- | | | | | |
|---|---|---|-----|--|
| A | D | ? | 1. | A 12 ounce bottle of beer has the same amount of alcohol as a 1½ ounce shot of whiskey. |
| A | D | ? | 2. | If a person is drunk, coffee can help him or her sober up. |
| A | D | ? | 3. | There are times it's O.K. for teenagers to have a drink. |
| A | D | ? | 4. | The same amount of alcohol will usually affect a 100 pound person more than a 150 pound person. |
| A | D | ? | 5. | As long as a person keeps out of trouble, it's all right for that person to drink as much as he or she wishes. |
| A | D | ? | 6. | Parents should not drink in front of their children or let their children drink in the home. |
| A | D | ? | 7. | A good reason for drinking is to help a person forget problems and hassles. |
| A | D | ? | 8. | There is nothing wrong with having a little wine or beer with a meal to make the meal more enjoyable. |
| A | D | ? | 9. | A person can have a drink everyday and be a responsible drinker. |
| A | D | ? | 10. | If you drink only beer, you can't become an alcoholic. |
| A | D | ? | 11. | Parents should show their disapproval <u>everytime</u> their son or daughter drinks too much. |
| A | D | ? | 12. | A good reason for <u>drinking</u> is to help a person feel less nervous <u>and shy</u> on a date. |

- 2
- A D ? 13. Most alcoholics are poor old men who live on the streets.
- A D ? 14. Alateen is for children whose parents have a drinking problem.
- A D ? 15. Alcohol will affect you less after a meal than before a meal.
- A D ? 16. Normally, when people drink, they tend to lose their physical co-ordination before they lose their judgement or concentration.
- A D ? 17. If a person has a drink two or three times a week, that person's brain, liver or stomach will probably be damaged.
- A D ? 18. People who don't drink are most likely afraid to enjoy themselves.
- A D ? 19. If someone close to you has a drinking problem it's best to tell someone you trust about it.
- A D ? 20. It is worse for a girl to drink than it is for a boy.
- A D ? 21. I know some people who drink a lot.

Have you learned about alcohol and alcoholism before?

Please circle either yes or no.

NO	YES	in school
NO	YES	at home
NO	YES	from friends
NO	YES	from a COYN youth staff member
NO	YES	from Church or Synagogue programs
NO	YES	other _____

Have you heard of COYN before?

Please circle either yes or no.

NO	YES	in school
NO	YES	at home
NO	YES	from friends
NO	YES	from a COYN youth staff member
NO	YES	from Church or Synagogue programs
NO	YES	other _____

FORM A SOCIAL DESIRABILITY SCALE

A

DATE: / /

Directions: To create your own CASPAR CODE NAME, please read each rule carefully and print the correct letter for each on the left-hand line.

PLEASE PRINT CLEARLY AND IN CAPITAL LETTERS

- _____ First letter of your middle name (if no middle name, write z)
 _____ First letter of month you were born in
 _____ First letter of your sex: Male or Female
 _____ First letter of the name of your street
 _____ First letter of your mother's first name (if unknown, write x)

Directions: Please read each of the sentences below. If you feel that the sentence is true about you, circle the letter T next to the sentence. The letter T stands for True. If you feel that the sentence is not true about you, circle the letter F next to the sentence. The letter F stands for False. Please remember that there are no right or wrong answers for any of these sentences. The sentence either is true about you or is not. If you have any questions at any time raise your hand and someone will come and help you.

- T F 1. I am always respectful to older people.
 T F 2. Sometimes I do not feel like doing what my teachers want me to do.
 T F 3. Sometimes I have felt like throwing things or breaking them.
 T F 4. I never act "fresh" or "talk back" to my parents.
 T F 5. When I make a mistake, I always admit that I am wrong.
 T F 6. I sometimes feel like making fun of other people.
 T F 7. I always wash my hands before every meal.
 T F 8. Sometimes, I wish I could just "mess around" instead of having to go to school.
 T F 9. I have never been tempted to break a rule or a law.
 T F 10. Sometimes I dislike helping my parents even though I know they need my help around the house.
 T F 11. Sometimes I say things just to impress my friends.
 T F 12. I never shout when I feel angry.

FORM B SOCIAL DESIRABILITY SCALE

B

DATE: / /

Directions: To create your own CASPAR CODE NAME, please read each rule carefully and print the correct letter for each on the left-hand line.

PLEASE PRINT CLEARLY AND IN CAPITAL LETTERS

_____ First letter of your middle name (if no middle name, write z)

_____ First letter of month you were born in

_____ First letter of your sex: Male or Female

_____ First letter of the name of your street

_____ First letter of your mother's first name (if unknown, write x)

Directions: Please read each of the sentences below. If you feel that the sentence is true about you, circle the letter T next to the sentence. The letter T stands for True. If you feel that the sentence is not true about you, circle the letter F next to the sentence. The letter F stands for False. Please remember that there are no right or wrong answers for any of these sentences. The sentence either is true about you or is not. If you have any questions at any time raise your hand and someone will come and help you.

- | | | |
|---|---|--|
| T | F | 1. I sometimes feel angry when I don't get my way. |
| T | F | 2. I never say anything that would make a person feel bad. |
| T | F | 3. Sometimes I argue with my mother to do something she doesn't want me to. |
| T | F | 4. I have never been tempted to break a rule or a law. |
| T | F | 5. I would never hit anyone who is smaller than I am. |
| T | F | 6. Sometimes I do not feel like doing what my teachers want me to. |
| T | F | 7. I am always polite even to people who are not very nice. |
| T | F | 8. I never borrow anything without asking permission first. |
| T | F | 9. Sometimes I say things just to impress people. |
| T | F | 10. I am always careful about keeping my clothes neat and my room picked up. |
| T | F | 11. Sometimes I don't feel like obeying my parents. |
| T | F | 12. Sometimes I wish I could just "mess around" instead of going to school. |

STUDENT FEEDBACK SHEET CYCLE 1

DATE: _____

CASPAR CODE NAME

To create your own CASPAR CODE NAME, please read each rule carefully and write the correct letter for each on the left-hand line.

_____ First letter of your middle name (if no middle name, write "z")

_____ First letter of month you were born in

_____ First letter of your sex: male or female

_____ First letter of the name of your street

_____ First letter of your mother's first name (if unknown, write "x")

Directions: Please circle the numbers of the word or phrase that you feel finishes the sentence best.

EXAMPLE

For me, today's session was

HELPPFUL → 0 1 2 3 4 (5) 6 7 (8) 9 10 NOT HELPPFUL

A circle here means you feel it was very helpful

A circle here means you feel it was neither helpful nor not helpful

A circle here means you feel it was some-what not helpful.

For me, today's session was

- | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|----|---|
| 1. too easy | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | too hard |
| 2. clear | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | confusing |
| 3. interesting | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | boring |
| 4. new to me | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | not new to me |
| 5. too short | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | too long |
| 6. important | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | worthless |
| 7. about something I liked talking about | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | about something I didn't like talking about |

STUDENT FEEDBACK SHEET CYCLE 2

Date: / /

CASPAR CODE NAME

Directions: To create your own CASPAR CODE NAME, please read each rule carefully and print the correct letter for each on the left-hand line.

PLEASE PRINT CLEARLY AND IN CAPITAL LETTERS

- First letter of your middle name (if no middle name, write "z")
- First letter of month you were born in
- First letter of your sex: Male or Female
- First letter of the name of your street
- First letter of your mother's first name (if unknown, write "x")

Directions: Below seven pairs of words or phrases finish the sentence: "For me, today's session was..." Choose one of the words or phrases from each pair that finishes the sentence best and then circle the number that stands for the strength(degree) of your choice:

For me, today's session was:

	VERY	SOMEWHAT	LITTLE	UNDECIDED	LITTLE	SOMEWHAT	VERY	
1. easy	1	2	3	4	5	6	7	hard
2. clear	1	2	3	4	5	6	7	confusing
3. interesting	1	2	3	4	5	6	7	boring
4. new to me	1	2	3	4	5	6	7	not new to me
5. short	1	2	3	4	5	6	7	long
6. helpful	1	2	3	4	5	6	7	not helpful
7. about something I liked talking about	1	2	3	4	5	6	7	about something I didn't like talking about

COMMENTS:

STUDENT FEEDBACK SHEET CYCLE 3

DATE: / /

Directions: To create your own CASPAR CODE NAME, please read each rule carefully and print the correct letter for each on the left-hand line.

PLEASE PRINT CLEARLY AND IN CAPITAL LETTERS

_____ First letter of your middle name (if no middle name, write z)

_____ First letter of month you were born in

_____ First letter of your sex: Male or Female

_____ First letter of the name of your street

_____ First letter of your mother's first name (if unknown, write x)

Directions: Circle one of the words or phrases from each pair that best finishes the sentence "For me, today's session was _____" and then circle the number that stands for the strength(degree) of your choice:

For me, today's session was:

<u>For me, today's session was:</u>			A little	Some- what	Very						
1.	easy	hard	1	2	3						
2.	clear	confusing	1	2	3						
3.	interesting	boring	1	2	3						
4.	new to me	not new to me	1	2	3						
5.	helpful	not helpful	1	2	3						
6.	something I liked talking about	something I didn't like talking about	1	2	3						
7.	How often did you ask questions, answer questions, or make comments during today's session? (Circle the number that tells about how often).										
	0	1	2	3	4	5	6	7	8	9	10 times

COMMENTS or QUESTIONS:

STUDENT FEEDBACK SHEET CYCLE 4 PHASE 1

DATE: / /

Directions: To create your own CASPAR CODE NAME, please read each rule carefully and print the correct letter for each on the left-hand line.

PLEASE PRINT CLEARLY AND IN CAPITAL LETTERS

_____ First letter of your middle name (if no middle name, write z)

_____ First letter of month you were born in

_____ First letter of your sex: Male or Female

_____ First letter of the name of your street

_____ First letter of your mother's first name (if unknown, write x)

Directions: Circle one of the words or phrases from each pair that best finishes the sentence "For me, the last five sessions have been _____" and then circle the number that stands for the strength (degree) of your choice:

For me, the last five sessions have been:

			A little	Some- what	Very						
1.	easy	hard	1	2	3						
2.	clear	confusing	1	2	3						
3.	interesting	boring	1	2	3						
4.	new to me	not new to me	1	2	3						
5.	helpful	not helpful	1	2	3						
6.	something I liked talking about	something I didn't like talking about	1	2	3						
7.	How often did you ask questions, answer questions, or make comments during the last five sessions? (Circle the number that tells about how often.)										
	0	1	2	3	4	5	6	7	8	9	10 times

COMMENTS or QUESTIONS:

STUDENT FEEDBACK SHEET CYCLE 4 PHASE 2

DATE: / /

Directions: To create your own CASPAR CODE NAME, please read each rule carefully and print the correct letter for each on the left-hand line.

PLEASE PRINT CLEARLY AND IN CAPITAL LETTERS

_____ First letter of your middle name (if no middle name, write z)

_____ First letter of month you were born in

_____ First letter of your sex: Male or Female

_____ First letter of the name of your street

_____ First letter of your mother's first name (If unknown, write x)

Directions: Circle one of the words or phrases from each pair that best finishes the sentence "For me, these sessions on alcohol have been _____" and then circle the number that stands for the strength (degree) of your choice:

For me, these sessions on alcohol have been:

		A little	Some- what	Very	
1. easy	hard	1	2	3	
2. clear	confusing	1	2	3	
3. interesting	boring	1	2	3	
4. new to me	not new to me	1	2	3	
5. helpful	not helpful	1	2	3	
6. something I liked talking about	something I didn't like talking about	1	2	3	
7. About how many times did you ask questions, answer questions, or make comments during these sessions on alcohol? (Circle the number that tells about how many times.)					
0-9	10-19	20-29	30-39	40-49	50 or more times

COMMENTS or QUESTIONS:

CYCLE 1

TEACHER PROCESS LOG

NAME: _____ SESSION #: _____ DATE: _____
 GRADE: _____ PERIOD: _____ TIME OF DAY: _____

1. Rate with a slash (/) your mood today:

Very Good	Very Poor
2. Rate with a slash (/) the mood of the class today:

Very Good	Very Poor
3. Place a check (✓) next to each method you used in today's session and rate with a slash (/) how well each worked.

	Very Well	Very Poorly
___ Large group discussion		
___ Small group discussion		
___ Lecture		
___ Demonstration		
___ Brainstorming		
___ Game		
___ Role playing		
___ Writing		
___ Others (Name): _____		
(Name): _____		

4. If you used a variation(s) numbered and listed at the end of the session sheet(s), place a check (✓) next to the number(s) of the variation(s) you used.

Variation(s): ___ 1 ___ 2 ___ 3 ___ 4 ___ 5 ___ 6

4a. If you used any other variation in activity, please describe:

5. Check (✓) whether or not you had the materials needed to conduct the unit. ___ YES ___ NO

5a. If no, please explain: _____

6. Check (✓) whether or not you used a peer leader with this session
____ YES ____ NO

6a. If yes, please state what s/he did. _____

6b. Rate with a slash (/) how well s/he did: Very Well Very Poorly

7. State with a slash (/) how long the session really lasted.

_____ minutes

10 20 30 40 50 60

8. Check (✓) whether or not there were any interruptions:
____ YES ____ NO

8a. If yes, describe: _____

9. Check (✓) whether or not anything was different or unusual about the class, the situation, or yourself. YES NO

9a. If yes, describe: _____

10. Rate with a slash (/) the students according to the following dimensions:

	Very Low					Very High
a. participation	_____		_____		_____	_____
b. understanding	_____		_____		_____	_____
c. cooperation	_____		_____		_____	_____
d. interest	_____		_____		_____	_____
e. amount of information gained	_____		_____		_____	_____
f. attitudes clarified or changed	_____		_____		_____	_____
g. increase decision-making skills	_____		_____		_____	_____
h. content readiness	_____		_____		_____	_____

11. Rate with a slash (/) the session according to the following dimensions:

	Very Low							Very High
a. organization								
b. clarity								
c. effect								
d. completeness								
e. difficulty								
f. content density								
g. complexity								

12. Rate with a slash (/) yourself according to the following dimensions:

	Very Low							Very High
a. preparedness								
b. comfortability with content								
c. comfortability with method(s)								
d. overall perfor- mance								

13. Place a check (✓) next to the time when this process log was completed:

____ right after ____ same day ____ day ____ couple ____ later
session as session after days later

COMMENTS: (other observations, changes you would make, etc.)

Pages I 27-30 were eliminated prior to submission to the ERIC Document Reproduction Service, due to reproduction problems.

Pages I 24-26 contain essentially the same information. Refer to pages 55-57 in the text for background information on Teacher Logs.

CYCLE 3
TEACHER PROCESS LOG

SESSION #: _____ DATE: _____

NAME: _____ CURRICULUM SECTION # COVERED: _____

GRADE: _____ GROUP: _____ PERIOD: _____

- I. LESSON DESCRIPTION: Please describe the content covered, method used, time taken, and use of a peer leader (if applicable) for each of this session.

	<u>PART</u>	<u>Content Covered</u>	<u>Method Used</u>	<u>Time Taken</u>	<u>PL Used</u>
1.	_____	_____	_____	_____	_____
2.	_____	_____	_____	_____	_____
3.	_____	_____	_____	_____	_____

- II. SESSION RATING: Overall, you would rate today's session as:

VERY POOR VERY GOOD
 |-----|-----|-----|-----|

- III. EXCEPTIONS TO IDEAL CLASSROOM CONDITIONS: Check any of the following occurrences that were exceptions to ideal classroom conditions from the evaluation point of view in terms of today's session:

- | | |
|---|--|
| _____ <u>students' mood</u> worse than usual
_____ <u>your mood</u> worse than usual
_____ <u>materials needed</u> to conduct class not available
_____ <u>more time needed</u> to cover this session's content
_____ <u>less time needed</u> to cover this session's content | _____ <u>presence</u> of observers or visitors
_____ <u>presence</u> of video-taping/filming
_____ <u>many interruptions</u> or a significant interruption
_____ <u>students absent</u> for a good part of session
_____ <u>external happenings</u> distracting students
_____ <u>more than 5 minutes</u> used for Non-AE activities. |
|---|--|

_____ other: (explain): _____

IV. PROCESS RATINGS: Please rate today's session in terms of the following dimensions:

1. How often did students ask questions or made comments indicating that they didn't quite get the prior content? 0 1-3 4-7 8-11 >12 times
2. How often did students probe you for more information, clarification, guidance, personal opinions; etc.? 0 1-3 4-7 8-11 >12 times
3. How often did you probe the responses made by students to prompt reflection, clarification, awareness, further inquiry, etc.? 0 1-3 4-7 8-11 >12 times
4. How often did students probe other students for more information, clarification, opinion, personal views, etc.? 0 1-3 4-7 8-11 >12 times
5. How often did you have to discipline students, i.e., ask them to pay attention, keep quiet, stop fooling around, etc.? 0 1-3 4-7 8-11 >12 times
6. How often did students make personal, trusting, or "open" responses to questions or events that occurred in class? 0 1-3 4-7 8-11 >12 times
7. How often did students attempt to avoid responding or addressing the issues being dealt with in this session? 0 1-3 4-7 8-11 >12 times
8. How often did you feel uncomfortable during today's session? 0 1-3 4-7 8-11 >12 times
9. How often did students disagree with the views and opinions expressed by other students in today's session? 0 1-3 4-7 8-11 >12 times
10. How often did you have to intervene to get things back on track, reorganize activities, regroup, etc.? 0 1-3 4-7 8-11 >12 times
11. How often did you disagree with the views and opinions expressed by students in today's session? 0 1-3 4-7 8-11 >12 times
12. What percentage of students said something?

V. CRITICAL FEATURES: For each critical feature observed, fill in student code name(s).

1. Active student becomes observably passive _____
2. Passive student becomes observably active _____
3. Student makes revealing comments in class _____
4. Student seeks help and is referred _____
5. Student hangs around after class or school asking questions _____
6. Student becomes very emotional: cries, gets angry, etc. _____
7. Student mentions talking to his/her family about the course. _____
8. Student privately talks about own drinking problem _____
9. Student privately talks about drinking problem of someone close _____
10. Other (explain): _____

VI. POSTSCRIPT: Did students fill out feedback sheets for this session?

____ YES; When: ____ at end of ____ next ____ other:
 session session _____
____ NO

Check the time when this process log was completed:

____ right after ____ same day ____ day ____ couple ____ later
 session as session after days later

COMMENTS (other observations, changes you would make best thing
or QUESTIONS: about it, worst thing about it, etc.)

Pages I 34-38 were eliminated prior to submission to the ERIC Document Reproduction Service, due to reproduction problems.

Pages I 31-33 contain essentially the same information. Refer to pages 55-57 in the text for background information on Teacher Logs

BASIC WORKSHOP TEACHER PRE-TEST

ALCOHOL EDUCATION

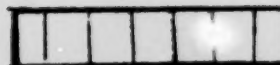
QUESTIONNAIRE

PART I

CASPAR Alcohol and Drug Education Program
Somerville, Mass.

*This questionnaire not to be used whole or
in part without specific permission of
the authors.*

CASPAR Alcohol and Drug Education Program
262 Highland Avenue
Somerville, Mass. 02143



INSTRUCTIONS

THIS QUESTIONNAIRE IS COMPLETELY CONFIDENTIAL AND WILL REMAIN SO . . . we don't want you to sign your name or give other personal identifying information. We have recorded a 7 digit number on the top corner of the questionnaire to aid us in computer coding purposes only. This code number is necessary for us to evaluate our program efforts.

PLEASE ANSWER THE QUESTIONS AS FRANKLY AS YOU CAN. PLEASE TRY AND ANSWER ALL THE QUESTIONS.

1. We're interested in the reasons that entered into your decision to take this workshop. For each of the possible reasons listed below, please check whether the reason was an important reason for you, a less important reason, or not a reason.

	<u>Important</u>	<u>Not so impt.</u>	<u>Not a reason</u>
Because you plan to include some alcohol education in your teaching	[]	[]	[]
Just to learn more about the area	[]	[]	[]
Because you want the course credits	[]	[]	[]
Because you're worried about student drinking	[]	[]	[]
Because friends of yours recommended it	[]	[]	[]
Because you're concerned about your drinking	[]	[]	[]
Because your administrator suggested it	[]	[]	[]
Other (Please specify) _____	[]	[]	

QUESTIONS ABOUT YOUR OWN PERSONAL VIEWS

2. This question is about your knowledge and opinions about alcohol, drinking, and alcoholism. Beside each statement please check the response which best indicates how you feel about the statement. We would like the answer which is the TRUE answer for you.

NOTE: To avoid confusion the terms drinking and drunk are described as follows:

Drinking - Simply the act of taking in an alcoholic beverage (a glass of beer or wine, a cocktail, a highball) for other than religious purposes. The term drinking does not mean excessive drinking or drunkenness unless this is so stated.

Drunk - Marked loss of control over ordinary physical activities (e.g., staggering), or confused speech, or not knowing what's going on, or nausea, or passing out.

Agree Disagree Not sure

- | | | | |
|--------------------------|--------------------------|--------------------------|--|
| ☐ | ☐ | ☐ | A. If people have had too much to drink, they can sober up faster if they have some black coffee or take a cold shower. |
| ☐ | ☐ | ☐ | B. It is possible for alcohol to be used responsibly by teenagers (13-15 year olds). |
| ☐ | ☐ | ☐ | C. People who take a cocktail before dinner run a high risk of developing alcoholism. |
| ☐ | ☐ | ☐ | D. With sufficient alcohol education for both young people and adults there will be no need for a legal drinking age in the U.S. |
| ☐ | ☐ | ☐ | E. Combining a drink or two with a few barbiturates is no more dangerous than having a few drinks. |
| ☐ | ☐ | ☐ | F. Teenagers should be allowed to decide for themselves whether they should be abstainers or drinkers. |
| ☐ | ☐ | ☐ | G. If one of my friends got drunk at a party at my house and danced with a lampshade on his/her head, I'd probably think it was funny. |

<u>Agree</u>	<u>Disagree</u>	<u>Not sure</u>	
[]	[]	[]	H. It is useless to say anything to persons with alcoholism about their drinking unless they admit they have a drinking problem.
[]	[]	[]	I. Alcohol education in the classroom can influence teenage drinking.
[]	[]	[]	J. A 12 oz. can of beer has about the same amount of alcohol as a 1 1/2 oz. shot of hard liquor.
[]	[]	[]	K. Drinking should be legal for 18 year olds.
[]	[]	[]	L. People who don't drink make me uncomfortable at parties.
[]	[]	[]	M. Young children who are allowed to drink at home under parental supervision are more likely to develop drinking problems than those who start drinking when they are older.
[]	[]	[]	N. I would be (I am) uncomfortable with discussing alcohol in my classroom.
[]	[]	[]	O. Being able to hold your liquor is a sign of masculinity.
[]	[]	[]	P. Studies show that it is possible for many alcoholic persons to resume social drinking.
[]	[]	[]	Q. Problem drinking is really the same as alcoholism.
[]	[]	[]	R. Most adults who drink at the rate of about a drink an hour are sober enough to drive safely.
[]	[]	[]	S. Teenage drivers are much more likely than older drivers to be involved in alcohol-related motor vehicle accidents.
[]	[]	[]	T. Most spouses of persons with alcoholism are as much in need of help as people with the illness.
[]	[]	[]	U. Alateen is a self-help organization for teenagers who drink too much.
[]	[]	[]	V. Alcohol is a food as well as a drug.

3. Listed below are some situations that people sometimes find themselves in. For each one check how much a person in that situation should feel free to drink. Please try to answer as if you yourself were in that position.

NOTE: To avoid confusion, the terms "high," and "drunk" are described as follows:

High - a pleasurable noticeable effect without going beyond socially acceptable behavior, e.g., increased gaiety, or slight fuzziness about what is going on, or drowsiness, etc.

Drunk- marked loss of control over ordinary physical activities (e.g., staggering), or confused speech, or not knowing what's going on, or nausea, or passing out.

	No drinking ↓	1 or 2 drinks but not enough to make one high ↓	OK to be high, but not drunk ↓	Getting drunk is sometimes all right ↓
How much drinking is all right for <u>you</u> as . . .				
A. . . . the host (hostess) of a small party or get-together	[]	[]	[]	[]
B. . . . a father (mother) playing with his (her) small kids	[]	[]	[]	[]
C. . . . a husband (wife) having dinner with his wife (husband)	[]	[]	[]	[]
D. . . . a man (woman) out at a bar with some of his male (female) friends	[]	[]	[]	[]
E. . . . a man (woman) about to drive his (her) car	[]	[]	[]	[]

4. How often do you have any beverages containing alcohol (wine, beer, whiskey, liquor, gin, rum, etc.)?

- ☐ Three or more times a day
- ☐ Two times a day
- ☐ Once a day
- ☐ Three or four times a week
- ☐ Once or twice a week
- ☐ Two or three times a month
- ☐ About once a month
- ☐ Less than once a month, but at least once a year
- ☐ Less than once a year
- ☐ I have never had any beverages containing alcohol (SKIP TO QUESTION 7)

5. How important would you say that each of the following is to you as a reason for drinking? (IF YOU USED TO DRINK BUT DO NOT NOW CHECK THIS BOX ☐ AND ANSWER THE QUESTIONS AS YOU WOULD HAVE WHEN YOU DID DRINK).

CHECK ONE FOR EACH REASON

	<u>Very Important</u>	<u>Somewhat Important</u>	<u>Not at all Important</u>
A. I drink because it makes social occasions more enjoyable.	☐	☐	☐
B. I drink because it helps me to relax.	☐	☐	☐
C. I drink because I need it when I am tense and nervous.	☐	☐	☐
D. I drink because a drink helps me to forget my worries.	☐	☐	☐
E. I drink because it makes a meal more enjoyable.	☐	☐	☐

6. When you drink, how often do you have five or more drinks?

- ☐ Nearly every time
- ☐ More than half the time
- ☐ Less than half the time
- ☐ Once in a while
- ☐ Almost never
- ☐ Never

7. Have you ever had a relative with a serious drinking problem? ☐ Yes
☐ No

8. Have you ever had a friend with a serious drinking problem? ☐ Yes
☐ No

Please check the item(s) below which best describes your cultural heritage.

- ☐ Italian-American
- ☐ Irish-American
- ☐ British-American
- ☐ Jewish-American
- ☐ Afro-American
- ☐ Canadian-American
- ☐ Polish-American
- ☐ German-American
- ☐ Other (Please specify) _____

VIEWS ABOUT ALCOHOL EDUCATION

9. INSTRUCTIONS: Three paragraphs about Alcohol Education are presented below. Each paragraph represents a different approach to alcohol education. Read each paragraph for its whole or broad philosophy and then answer the questions which follow.

Model "A"

Alcohol education consists of imparting information about the nature of ethyl alcohol, its uses outside the body, the scientific facts of its effects upon the mind and upon the body tissues when inside the body, and the desirability of enjoying the fullness of life without alcohol's deceptive influences. Alcohol education should create in students a desire to abstain from drinking and to help change prevailing sentiment as to the use of ethyl alcohol as a beverage. The first effect of a drink is deceptive, the temptations to drink are many, and alcohol is habit forming. Therefore, the attitude to "refuse the first drink" and "to stop now while you can" should be developed. Experience today shows that many of our most talented people are hurt, others suffer severely, while many are completely ruined by the use of alcohol. These people were deceived, as children will be if they are not taught the facts about alcohol in school.

A. Regarding this model:

- ☐ I strongly agree with it.
- ☐ I moderately agree with it.
- ☐ I don't know if I agree or disagree with it.
- ☐ I moderately disagree with it.
- ☐ I strongly disagree with it.

Model "B"

Alcohol education should be part of every student's preparation for living in today's predominantly drinking society. Behavior in relation to alcohol, for young people, as well as adults, involves their attitudes and values. Teachers should create a free and open climate for discussion. Students take an active role in examining their attitudes and looking at the factors which influence their decisions to drink or not to drink, to get high or drunk in a variety of situations such as at parties, at sport events, after exams, on the corner. Through role-playing, and small group discussions, students receive feedback from one another. They are encouraged to adopt their own norms for responsible use or non-use of alcohol so that it does not interfere with their social relationships, school, health or freedom. Unbiased information about alcohol - its positive and negative effects - is introduced in answer to real life issues posed by students themselves. Young people also need to learn about the nature of problem drinking and sources of help for themselves, their friends or members of their family.

B. Regarding this model:

- ☐ I strongly agree with it.
- ☐ I moderately agree with it.
- ☐ I don't know if I agree or disagree with it.
- ☐ I moderately disagree with it.
- ☐ I strongly disagree with it.

Model "C"

The emphasis of alcohol education should be on alcoholism; the exploration of its possible causes in our society and its social ramifications. Students should be made aware of the warning signs of alcoholism and personality types prone to the problem. Information regarding the progression of alcoholism from heavy drinking to Skid-row should be given. Identification is made of the current treatment programs for the various aspects of alcoholism; detoxification and rehabilitation programs. A speaker from Alcoholics Anonymous is asked to come for an assembly. Some factual information should be provided on the use and abuse of alcohol. Presentations should include materials on the nature of alcoholic beverages, metabolism of alcohol in the body and the diseases accompanying misuse of alcohol. Films on the common problems associated with the misuse of alcohol, such as traffic accidents, body damage, and economic losses should be shown.

C. Regarding this model:

- ☐ I strongly agree with it.
- ☐ I moderately agree with it.
- ☐ I don't know if I agree or disagree with it.
- ☐ I moderately disagree with it.
- ☐ I strongly disagree with it.

10. Below are a few more questions about the models. Please answer as best as you can.

- A. If you were asked to teach alcohol education, which of the above models would be your first choice? Second? Third?

1st choice: Model _____ (ENTER MODEL LETTERS
"A", "B" or "C")
2nd choice: Model _____
3rd choice: Model _____

- B. What would be the order of preference of your Department Head? Your Principal?

Your Department Head's		Your Principal's	
1st choice:	Model _____	1st choice:	Model _____
2nd choice:	Model _____	2nd choice:	Model _____
3rd choice:	Model _____	3rd choice:	Model _____

- C. What do you think would be the order of preference of the Somerville School Committee?

1st choice: Model _____
2nd choice: Model _____
3rd choice: Model _____

- D. What do you think would be the order of preference of the parents of your students?

1st choice: Model _____
2nd choice: Model _____
3rd choice: Model _____

280

THE FOLLOWING TABLE CONCERNS YOUR GENERAL VIEWS ABOUT ALCOHOL EDUCATION

11. For each grade level in the left hand column, please check the approximate number of hours of classroom alcohol education you think that level of students should receive during the year. Please complete the entire table K-12.

GRADE LEVEL	<u>Number of Hours of Classroom Alcohol Education Per Year</u>					
	None	1	2-4	4-9	10-14	15-19 20 or More
K-3						
4						
5						
6						
7						
8						
9						
10						
11						
12						

12. If you answered "none" to any of the above, please check the reason(s) below which led you to do so. (CHECK MORE THAN ONE IF APPROPRIATE)

☐ Alcohol education is a family responsibility.

☐ The curriculum is already too full.

☐ Alcohol education is not effective.

☐ Other (PLEASE SPECIFY) _____

13. Are you a regular classroom teacher or are you primarily something else - an administrator, counselor, nurse, librarian, special teacher, or physical education teacher? Check one.

- ☐ Regular classroom teacher
☐ Not primarily a regular classroom teacher

14. Do you work at the elementary school level or at the junior or senior high school level?

- ☐ Elementary school level
☐ Junior high school level
☐ Senior high school level

15. A variety of teaching methods are used in various classroom situations. How often do you use each of the following methods in your regular classroom teaching? Check one answer for each method.

Check here ☐ if the question doesn't apply because you're not primarily a regular classroom teacher.

	<u>Frequently</u>	<u>Sometimes</u>	<u>Almost never</u>	<u>Never</u>
Talks or presentations by the classroom teacher	☐	☐	☐	☐
Role playing	☐	☐	☐	☐
Learning games	☐	☐	☐	☐
Student panel discussions	☐	☐	☐	☐
Having students break into small groups for discussions or other small-group classroom activities	☐	☐	☐	☐
Having students do polls or inter-views outside class	☐	☐	☐	☐
Field trips	☐	☐	☐	☐
Class discussion	☐	☐	☐	☐
Other (Please Specify)	☐	☐	☐	☐

16. During the last school year, did you include any alcohol education in your regular classroom teaching (in Somerville or elsewhere)? Check one.
- ☐ Doesn't apply - I am (was) not a regular classroom teacher
 - ☐ Yes, included some planned alcohol education
 - ☐ Yes, but only on an informal basis when the subject came up
 - ☐ No
17. My subject area lends itself to alcohol education. Please check the correct response.
- ☐ Yes
 - ☐ No
18. Do you think that alcohol education should be included as part of the regular curriculum in your department or subject area? Check one.
- ☐ Doesn't apply - I'm not in a subject-related department
 - ☐ Am strongly in favor
 - ☐ Am more in-favor than opposed
 - ☐ Am more opposed than in favor
 - ☐ Am strongly opposed
 - ☐ Undecided
19. During the past three years, have you had any special training in any of the following areas... for example, a course or workshop? Be sure to include training you may have had with groups such as the Human Development Program, The Sanctuary, or the CASPAR staff (Lena DiCicco, Dixie Mills, or their colleagues). Check all areas in which you've had some training during the past three years.
- ☐ Alcohol education
 - ☐ Drug education
 - ☐ Values clarification, affective education, decision-making, helping skills, etc.
 - ☐ Innovative teaching methods such as role playing, games, small group techniques, etc.
20. Altogether, about how many hours of training did you have in the above areas during the past three years? Check one.
- | | |
|---|---|
| ☐ None | ☐ 20 to 29 hours |
| ☐ 1 to 4 hours | ☐ 30 to 39 hours |
| ☐ 5 to 9 hours | ☐ 40 to 49 hours |
| ☐ 10 to 14 hours | ☐ 50 or more hours |
| ☐ 15 to 19 hours | |

21. How comfortable would you feel about talking informally with students about their drinking, or a drinking problem of their friends or family? Check one.

☐ Very comfortable ☐ Not sure
☐ Fairly comfortable
☐ Somewhat uncomfortable
☐ Very uncomfortable

22. During the past year, have any students talked with you outside of classroom discussions about any of the following kinds of problems? Check all that apply.

☐ The student's own use of alcohol
☐ The student's own use of other drugs
☐ A teenage friend's use of alcohol
☐ A teenage friend's use of other drugs
☐ Alcohol problems in the student's family
☐ Other problems in the student's family

23. Altogether, how many different students talked with you outside class during the past year about an alcohol or drug problem -- their own, a friend or relative's? Check one.

☐ None
☐ Just one
☐ 2 or 3
☐ 4 or 5
☐ 6 or more

24. During the past year, have you referred any students to a counseling or treatment resource for special help with an alcohol or drug problem? Check the number of students you referred.

☐ None
☐ Just one
☐ 2 or 3
☐ 4 or 5
☐ 6 or more

THANK YOU FOR YOUR COOPERATION

BASIC WORKSHOP TEACHER POST-TEST

ALCOHOL EDUCATION

QUESTIONNAIRE

PART II

CASPAR Alcohol and Drug Education Program

Somerville, Mass.

--	--	--	--	--	--	--	--	--	--

INSTRUCTIONS

THIS QUESTIONNAIRE IS COMPLETELY CONFIDENTIAL AND WILL REMAIN SO ... we don't want you to sign your name or give other personal identifying information. We have recorded a 7 digit number on the top corner of the questionnaire to aid us in computer coding purposes only. This code number is necessary for us to evaluate our program efforts.

PLEASE ANSWER THE QUESTIONS AS FRANKLY AS YOU CAN. PLEASE TRY AND ANSWER ALL THE QUESTIONS.

- 1a. Given what you know about alcohol education list three characteristics of an effective teacher of this subject.

- 1b. List 4 resources that are available to you to help a student with a drinking problem.

- 1c. List 4 resources that are available to you to help a student with a drinking problem in his/her family.

QUESTIONS ABOUT YOUR OWN PERSONAL VIEWS

2. This question is about your knowledge and opinions about alcohol, drinking, and alcoholism. Beside each statement please check the response which best indicates how you feel about the statement. We would like the answer which is the TRUE answer for you.

NOTE: To avoid confusion the terms drinking and drunk are described as follows:

Drinking - Simply the act of taking in an alcoholic beverage (a glass of beer or wine, a cocktail, a highball) for other than religious purposes. The term drinking does not mean excessive drinking or drunkenness unless this is so stated.

Drunk - Marked loss of control over ordinary physical activities (e.g., staggering), or confused speech, or not knowing what's going on, or nausea, or passing out.

- | <u>Agree</u> | <u>Disagree</u> | <u>Not sure</u> | |
|--------------|-----------------|-----------------|--|
| [] | [] | [] | A. If people have had too much to drink, they can sober up faster if they have some black coffee or take a cold shower. |
| [] | [] | [] | B. It is possible for alcohol to be used responsibly by teenagers (13-15 year olds). |
| [] | [] | [] | C. People who take a cocktail before dinner run a high risk of developing alcoholism. |
| [] | [] | [] | D. With sufficient alcohol education for both young people and adults there will be no need for a legal drinking age in the U.S. |
| [] | [] | [] | E. Combining a drink or two with a few barbiturates is no more dangerous than having a few drinks. |
| [] | [] | [] | F. Teenagers should be allowed to decide for themselves whether they should be abstainers or drinkers. |
| [] | [] | [] | G. If one of my friends got drunk at a party at my house and danced with a lampshade on his/her head, I'd probably think it was funny. |

<u>Agree</u>	<u>Disagree</u>	<u>Not sure</u>	
[]	[]	[]	H. It is useless to ^{Say anything to} ~~teach~~ persons with alcoholism about their drinking unless they admit they have a drinking problem.
[]	[]	[]	I. Alcohol education in the classroom can influence teenage drinking.
[]	[]	[]	J. A 12 oz. can of beer has about the same amount of alcohol as a 1½ oz. shot of hard liquor.
[]	[]	[]	K. Drinking should be legal for 18 year olds.
[]	[]	[]	L. People who don't drink make me uncomfortable at parties.
[]	[]	[]	M. Young children who are allowed to drink at home under parental supervision are more likely to develop drinking problems than those who start drinking when they are older.
[]	[]	[]	N. I would be (I am) uncomfortable with discussing alcohol in my classroom.
[]	[]	[]	O. Being able to hold your liquor is a sign of masculinity.
[]	[]	[]	P. Studies show that it is possible for many alcoholic persons to resume social drinking.
[]	[]	[]	Q. Problem drinking is really the same as alcoholism.
[]	[]	[]	R. Most adults who drink at the rate of about a drink an hour are sober enough to drive safely.
[]	[]	[]	S. Teenage drivers are much more likely than older drivers to be involved in alcohol-related motor vehicle accidents.
[]	[]	[]	T. Most spouses of persons with alcoholism are as much in need of help as people with the illness.
[]	[]	[]	U. Alateen is a self-help organization for teenagers who ~~have~~ ^{Too much} drinking ~~problem~~ .
[]	[]	[]	V. Alcohol is a food as well as a drug.

3. Listed below are some situations that people sometimes find themselves in. For each one check how much a person in that situation should feel free to drink. Please try to answer as if you yourself were in that position.

NOTE: To avoid confusion, the terms "high," and "drunk" are described as follows:

High - a pleasurable noticeable effect without going beyond socially acceptable behavior, e.g., increased gaiety, or slight fuzziness about what is going on, or drowsiness, etc.

Drunk - marked loss of control over ordinary physical activities (e.g., staggering), or confused speech, or not knowing what's going on, or nausea, or passing out.

	No drinking ↓	1 or 2 drinks but not enough to make one high ↓	OK to be high, but not drunk ↓	Getting drunk is sometimes all right ↓
How much drinking is all right for <u>you</u> as . . .				
A. . . . the host (hostess) of a small party or get-together	[]	[]	[]	[]
B. . . . a father (mother) playing with his (her) small kids	[]	[]	[]	[]
C. . . . a husband (wife) having dinner with his wife (husband)	[]	[]	[]	[]
D. . . . a man (woman) out at a bar with some of his male (female) friends	[]	[]	[]	[]
E. . . . a man (woman) about to drive his (her) car	[]	[]	[]	[]

4. How often do you have any beverages containing alcohol (wine, beer, whiskey, liquor, gin, rum, etc.)?

- ☐ Three or more times a day
- ☐ Two times a day
- ☐ Once a day
- ☐ Three or four times a week
- ☐ Once or twice a week
- ☐ Two or three times a month
- ☐ About once a month
- ☐ Less than once a month, but at least once a year
- ☐ Less than once a year
- ☐ I have never had any beverages containing alcohol (SKIP TO QUESTION 7)

5. How important would you say that each of the following is to you as a reason for drinking? (IF YOU USED TO DRINK BUT DO NOT NOW CHECK THIS BOX ☐ AND ANSWER THE QUESTIONS AS YOU WOULD HAVE WHEN YOU DID DRINK).

CHECK ONE FOR EACH REASON

	<u>Very</u> <u>Important</u>	<u>Somewhat</u> <u>Important</u>	<u>Not at all</u> <u>Important</u>
A. I drink because it makes social occasions more enjoyable.	☐	☐	☐
B. I drink because it helps me to relax.	☐	☐	☐
C. I drink because I need it when I am tense and nervous.	☐	☐	☐
D. I drink because a drink helps me to forget my worries.	☐	☐	☐
E. I drink because it makes a meal more enjoyable.	☐	☐	☐

6. When you drink, how often do you have five or more drinks?

- ☐ Nearly every time
- ☐ More than half the time
- ☐ Less than half the time
- ☐ Once in a while
- ☐ Almost never
- ☐ Never

7. Have you ever had a relative with a serious drinking problem? ☐ Yes
☐ No

8. Have you ever had a friend with a serious drinking problem? ☐ Yes
☐ No

Please check the item(s) below which best describes your cultural heritage.

- ☐ Italian-American
- ☐ Irish-American
- ☐ British-American
- ☐ Jewish-American
- ☐ Afro-American
- ☐ Canadian-American
- ☐ Polish-American
- ☐ German-American
- ☐ Other (Please specify) _____

VIEWS ABOUT ALCOHOL EDUCATION

9. INSTRUCTIONS: Three paragraphs about Alcohol Education are presented below. Each paragraph represents a different approach to alcohol education. Read each paragraph for its whole or broad philosophy and then answer the questions which follow.

Model "A"

Alcohol education consists of imparting information about the nature of ethyl alcohol, its uses outside the body, the scientific facts of its effects upon the mind and upon the body tissues when inside the body, and the desirability of enjoying the fullness of life without alcohol's deceptive influences. Alcohol education should create in students a desire to abstain from drinking and to help change prevailing sentiment as to the use of ethyl alcohol as a beverage. The first effect of a drink is deceptive, the temptations to drink are many, and alcohol is habit forming. Therefore, the attitude to "refuse the first drink" and "to stop now while you can" should be developed. Experience today shows that many of our most talented people are hurt, others suffer severely, while many are completely ruined by the use of alcohol. These people were deceived, as children will be if they are not taught the facts about alcohol in school.

A. Regarding this model:

- ☐ I strongly agree with it.
- ☐ I moderately agree with it.
- ☐ I don't know if I agree or disagree with it.
- ☐ I moderately disagree with it.
- ☐ I strongly disagree with it.

Model "B"

Alcohol education should be part of every student's preparation for living in today's predominantly drinking society. Behavior in relation to alcohol, for young people, as well as adults, involves their attitudes and values. Teachers should create a free and open climate for discussion. Students take an active role in examining their attitudes and looking at the factors which influence their decisions to drink or not to drink, to get high or drunk in a variety of situations such as at parties, at sport events, after exams, on the corner. Through role-playing, and small group discussions, students receive feedback from one another. They are encouraged to adopt their own norms for responsible use or non-use of alcohol so that it does not interfere with their social relationships, school, health or freedom. Unbiased information about alcohol - its positive and negative effects - is introduced in answer to real life issues posed by students themselves. Young people also need to learn about the nature of problem drinking and sources of help for themselves, their friends or members of their family.

B. Regarding this model:

- ☐ I strongly agree with it.
- ☐ I moderately agree with it.
- ☐ I don't know if I agree or disagree with it.
- ☐ I moderately disagree with it.
- ☐ I strongly disagree with it.

Model "C"

The emphasis of alcohol education should be on alcoholism; the exploration of its possible causes in our society and its social ramifications. Students should be made aware of the warning signs of alcoholism and personality types prone to the problem. Information regarding the progression of alcoholism from heavy drinking to Skid-row should be given. Identification is made of the current treatment programs for the various aspects of alcoholism; detoxification and rehabilitation programs. A speaker from Alcoholics Anonymous is asked to come for an assembly. Some factual information should be provided on the use and abuse of alcohol. Presentations should include materials on the nature of alcoholic beverages, metabolism of alcohol in the body and the diseases accompanying misuse of alcohol. Films on the common problems associated with the misuse of alcohol, such as traffic accidents, body damage, and economic losses should be shown.

C. Regarding this model:

- ☐ I strongly agree with it.
- ☐ I moderately agree with it.
- ☐ I don't know if I agree or disagree with it.
- ☐ I moderately disagree with it.
- ☐ I strongly disagree with it.

10. Below are a few more questions about the models. Please answer as best as you can.

A. If you were asked to teach alcohol education, which of the above models would be your first choice? Second? Third?

1st choice: Model _____ (ENTER MODEL LETTERS
"A", "B" or "C")
2nd choice: Model _____
3rd choice: Model _____

B. What would be the order of preference of your Department Head? Your Principal?

Your Department Head's		Your Principal's	
1st choice:	Model _____	1st choice:	Model _____
2nd choice:	Model _____	2nd choice:	Model _____
3rd choice:	Model _____	3rd choice:	Model _____

C. What do you think would be the order of preference of the Somerville School Committee?

1st choice: Model _____
2nd choice: Model _____
3rd choice: Model _____

D. What do you think would be the order of preference of the parents of your students?

1st choice: Model _____
2nd choice: Model _____
3rd choice: Model _____

THE FOLLOWING TABLE CONCERNS YOUR GENERAL VIEWS ABOUT ALCOHOL EDUCATION

11. For each grade level in the left hand column, please check the approximate number of hours of classroom alcohol education you think that level of students should receive during the year. Please complete the entire table K-12.

GRADE LEVEL	<u>Number of Hours of Classroom Alcohol Education</u>						<u>Per Year</u>
	None	1	2-4	4-9	10-14	15-19	20 or More
K-3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

12. If you answered "none" to any of the above, please check the reason(s) below which led you to do so. (CHECK MORE THAN ONE IF APPROPRIATE)

[] Alcohol education is a family responsibility.

[] The curriculum is already too full.

[] Alcohol education is not effective.

[] Other (PLEASE SPECIFY) _____

13. My subject area lends itself to alcohol education.
Please check the correct response.
- ☐ Yes
☐ No
14. Do you think that alcohol education should be included as part
of the regular curriculum in your department or subject area?
Check one.
- ☐ Doesn't apply - I'm not in a subject-related department
- ☐ Am strongly in favor
☐ Am more in favor than opposed
☐ Am more opposed than in favor
☐ Am strongly opposed
☐ Undecided
15. How comfortable would you feel about talking informally with
students about their drinking, or a drinking problem of their
friends or family? Check one.
- ☐ Very comfortable
☐ Fairly comfortable
☐ Somewhat uncomfortable
☐ Very uncomfortable
☐ Not sure

THANK YOU FOR YOUR COOPERATION

TEACHER DELAYED POST-TEST

CASPAR, INC.

ALCOHOL EDUCATION PROGRAM

A UNIT OF THE CAMBRIDGE-SOMERVILLE ALCOHOLISM PROGRAM

162 Highland Avenue • Somerville, Massachusetts 02143 • Telephone (617) 623-2080

Chairperson, GLORIA ALBANO

Director, LENA DiCICCO

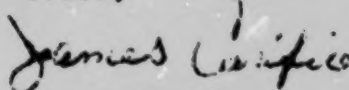
June 22, 1977

Dear Workshop Participant:

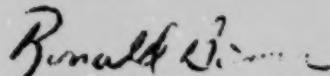
We need your response to the attached questionnaire to help us evaluate the impact of the CASPAR Alcohol Education Program. We assure you that your responses will be kept strictly confidential. Code numbers are used only to make appropriate data analyses possible. Therefore, would you please complete the questionnaire attached and return it to us by July 3 in the stamped envelope enclosed.

We thank you for your cooperation.

Yours,



James Carifio
Program Evaluator



Ronald Biron
Assistant Evaluator

lc

Enclosure

T65

CASPAR, INC.

297

1. Beside each statement below please check the response which best indicates how you feel about the statement.

NOTE: To avoid confusion the terms drinking and drunk are described as follows:

Drinking - Simply the act of taking in an alcoholic beverage (a glass of beer or wine, a cocktail, a highball) for other than religious purposes. The term drinking does not mean excessive drinking or drunkenness unless this is so stated.

Drunk - Marked loss of control over ordinary physical activities (e.g., staggering), or confused speech, or not knowing what's going on, or nausea, or passing out.

<u>Agree</u>	<u>Disagree</u>	<u>Not sure</u>	
()	()	()	A. If people have had too much to drink they can sober up faster if they have some black coffee or take a cold shower.
()	()	()	B. It is possible for alcohol to be used responsibly by teenagers (13-15 year olds).
()	()	()	C. People who take a cocktail before dinner run a high risk of developing alcoholism.
()	()	()	E. Combining a drink or two with a few barbiturates is no more dangerous than having a few drinks.
()	()	()	F. Teenagers should be allowed to decide for themselves whether they should be abstainers or drinkers.
()	()	()	G. If one of my friends got drunk at a party at my house and danced with a lampshade on his/her head, I'd probably think it was funny.

<u>Agree</u>	<u>Disagree</u>	<u>Not sure</u>	
()	()	()	H. It is useless to say anything to persons with alcoholism about their drinking unless they admit they have a drinking problem.
()	()	()	I. Alcohol education in the classroom can influence teenage drinking.
()	()	()	J. A 12 oz. can of beer has about the same amount of alcohol as a 1½ oz. shot of hard liquor.
()	()	()	K. Drinking should be legal for 18 year olds.
()	()	()	L. People who don't drink make me uncomfortable at parties.
()	()	()	M. Young children who are allowed to drink at home under parental supervision are more likely to develop drinking problems than those who start drinking when they are older.
()	()	()	N. I would be (I am) uncomfortable with discussing alcohol in my classroom.
()	()	()	O. Being able to hold your liquor is a sign of masculinity.
()	()	()	P. Studies show that it is possible for many alcoholic persons to resume social drinking.
()	()	()	Q. Problem drinking is really the same as alcoholism.
()	()	()	R. Most adults who drink at the rate of about a drink an hour are sober enough to drive safely.
()	()	()	S. Teenage drivers are much more likely than older drivers to be involved in alcohol-related motor vehicle accidents.
()	()	()	T. Most spouses of persons with alcoholism are as much in need of help as people with the illness.
()	()	()	U. Alateen is a self-help organization for teenagers who drink too much.
()	()	()	V. Alcohol is a food as well as a drug.

() IF YOU ARE NOT A CLASSROOM TEACHER, PLEASE CHECK HERE AND SKIP TO QUESTION #7.

2. Did you use any of the CASPAR Alcohol Education materials to teach students about alcohol during the last school year?

_____ YES _____ NO (if no please state reasons below)

3. If you answered question 2 above yes, please indicate the ways in which you used the CASPAR material by checking all that apply below:

- _____ 1. Curriculum tryout
_____ 2. Homework assignment for Basics Course
_____ 3. Homework assignment for Methods Course
_____ 4. Other: (please explain below)

4. Did you use the chapter in junior high The Healthful Living Program textbook to teach students about alcohol during the last school year?

____ YES ____ NO

5. If you answered question number 4 above "yes", please fill out the table given below giving the class period, grade, number of periods taught and number of students exposed to the chapter on Alcohol in The Healthful Living Program textbook.

Period	Grade	# of Periods Taught	# of Students Exposed

6. Did you use any materials other than the chapter in the Healthful Living Program textbook or the CASPAR materials to teach students about alcohol during the past year.

____ NO ____ YES (if yes please explain below)

7. Please indicate approximately how many students talked to you outside of classroom discussions about each of the following during the past school year:

- A. The student's own use of alcohol _____
- B. A friend's use of alcohol _____
- C. Alcohol problems in the student's family _____
- D. Other alcohol related problems (please explain): _____

8. Please indicate approximately how many students you referred to a counseling or treatment resource or person for special help with an alcohol related problem and state what the resource was.

9. In what grades do you think students should receive the greatest amount of alcohol education?

10. Are you presently planning to use the CASPAR Alcohol Education materials in your classes next year?

_____ YES _____ NOT SURE _____ NO

11. If you answered question 10 above no or not sure, please explain.

12. What specific things do you think CASPAR can do to best meet your needs in the coming year?

13. Because of your experiences this year with CASPAR related activities, is there anything different in your reactions to or feelings about teenage use or non-use of alcohol?

☐ YES ☐ NO ☐ UNSURE

Please explain:

14. Because of your experiences this year with CASPAR related activities, do you feel differently about your own drinking?

☐ YES ☐ NO ☐ UNSURE

Please explain:

THANK YOU!

APPENDIX II

Preliminary Findings
of the Alcohol Education
Week in the Comparison
Community

CASPAR Alcohol Education Program

Preliminary Findings of the
Alcohol Education Week in the Comparison Community
April 4-11, 1977

Evaluation Report No.

Ronald Biron
James Carifio
Robert White

Not for Public Dissemination

TABLE OF CONTENTS

	pages
Abstract and Organization of Report.....	2
Definition of Terms.....	3
INTRODUCTION	
I. Overview.....	4
II. Instruments & Design.....	4
III. Methodology.....	5
IV. Sample Characterization.....	5
FINDINGS	
I. Pre-test: Fact Items.....	7
II. Pre-test: Attitude Items.....	12
III. Pre-to-Post Changes: Fact Items.....	17
IV. Pre-to-Post Changes: Attitude Items.....	22
Discussion and Conclusions.....	27
APPENDICES	
I. Program Description.....	A1
II. Test Exemplars.....	A4
III. Fact and Attitude Subtests and Item Analysis.....	A8
IV. Reliability Study.....	A12
V. Sources of Knowledge about COYN.....	A16
VI. Sources of Previous alcohol education.....	A19
VII. Social Desirability Scale.....	A22
VIII. (a) Evaluation Design and (b) Questionable Permanence of Treatment Effect.....	A25
IX. Attrition Rate.....	A33

Abstract

According to the measures used, Alcohol Education Week changed students' knowledges and attitudes about alcohol use and abuse. The nature of these changes, however, were not what one might expect from conventional analyses of the data. Students did answer significantly more fact items correctly and significantly more attitude items positively on the post test than on the pre test. Students, however, did not answer fewer fact items incorrectly or fewer attitude items negatively pre to post. The gain in correct or positive scores, therefore, came from students giving fewer uncertain responses on the post test than on the pre test. This clarification of uncertainty effect, however, is in need of further study. Some tentative evidence from two classrooms of students who were fortuitously post-tested two weeks later than other students suggests that the clarification of uncertainty effect that was observed might be quite transitory, particularly for B group students, as decreased in positive responses and increased in negative responses were observed in both of these classrooms. An alternative explanation of the latter findings, however, might be given in terms of maturational or sociological factors. Analysis of the pre-test data showed that with advancement in grades (7th to 9th), B group students tended to give more wrong and negative responses than A group students, and that more B group than A group students reported learning about alcohol from friends as opposed to home, school, church, or synagogue sources. Negative gains for B group students, therefore, might be due to maturational or sociological factors rather than program factors or to an interaction between the two. In summary, then, the major findings from the present study would seem to be (1) that an alcohol education week is more able to help students with uncertain beliefs and ambivalent attitudes (or no attitudes) than students with false beliefs and negative attitudes but perhaps only minimally or transitorily (i.e., a clarification of uncertainty effect), and (2) that for a certain subgroup of students (upper grade B group students) a more prolonged, intensive, systematic, and perhaps community-based approach might be needed to affect the positive changes desired.

Organization of Report

Discussions about instruments, design, methodology and simple characterization are presented first in this report. Analyses and findings are then presented in four sections: (1) pre-test, fact items; (2) pre-test, attitude items; (3) pre-to-post changes, fact items; and (4) pre-to-post changes, attitude items. The pre-test analyses are three-way analyses of variance while the pre-to-post analyses are three-way analyses of variance for repeated measures. The three design factors used in analyses were grade, group, and alhome (i.e., whether or not students had received prior alcohol education). Each of the four sections contains (a) a summary of the findings (b) three tables of relevant statistics and (c) findings in itemized form. Discussion follows with extensive appendices. Note: all statements about significance in the report refer to statistical significance.

Definition of Terms

1. Alhome = Home as a source of previous alcohol education (a self-report category on the pre-test). Empirically, home exposure was found to be the best predictor of of significant prior learning about alcohol of those sources examined (i.e. school, church, friends)
2. Attrition Rate = Number of students lost in sample due to lack of matchable code names on the measures employed.
3. CASPAR = Cambridge and Somerville Program for Alcoholism Rehabilitation.
4. Code Name = Procedure found on front of questionnaires which when followed by students allows for questionnaires to be matched across time points without revealing individual students' identities.
- 5.
6. Group = A teacher's or school's categorization of a class as being "better" or "worse" in terms of teaching alcohol content. Operationally, the distinguishing characteristics for groups seem to be academic abilities.

A group = A class categorized by its teacher or the school as being easier to teach alcohol content to which operationally seems to indicate a group of better academic abilities.

B group = A class categorized by its teacher or school as being more difficult to teach alcohol content to which operationally seems to indicate a group of poorer academic abilities.
7. Matched Group = Group of students for whom there were matchable code names on all three questionnaires given (SDS, Pre, and Post).
8. PAP. = The test developed by CASPAR used to gather pre and post program data.
9. Response Rate = One of the three possible responses that can be made by a student to each fact and attitude item.

<u>Fact Items</u>	<u>Attitude Items</u>
correct	positive
uncertain	uncertain (or ambivalent)
incorrect	negative
10. SDS = Social Desirability Scale developed by CASPAR

INTRODUCTION

I. Overview

This report presents the preliminary findings of the alcohol education week held April 4-11, 1977, at the Junior High School in . The weeks program included student program orientation, films, skits and speakers, rap sessions, and informal evaluation (see Appendix I for a more detailed description). The evaluation instruments and design were constructed by CASPAR and the design's operationalization carried out by the school's science department under the supervision of the Health Education Director.

Although the instruments used in the present study had been developed by CASPAR for a ten-session, teacher-taught curriculum in Somerville, MA., Health Education Director judged them to be suitable for use (i.e., content valid) in terms of evaluating activities. It was also determined that the purpose of the evaluation conducted was to gather some effectiveness data for Peabody on its program and to further instrument research and development for CASPAR in a comparable community.

II. Instruments & Design

The two instruments developed by CASPAR and used for the evaluation are the Pre-and-Post test (PAP) and the Social Desirability Scale (SDS). (See Appendix II for samples).

The Pre-and-Post test has four parts; These are: (1) a code name procedure developed by CASPAR that protects anonymity but allows individual instrument matching to be done (see Working Paper #1); (2) twenty fact and attitude items on alcohol use and abuse; (3) six items on students' sources of previous alcohol education and (4) six items on the students' sources of knowledge about the (see Appendix III).

A Test-retest reliability study was performed on the Pre and Post instruments and the fact items were found to have a reliability coefficient of .61 and the attitude items a reliability coefficient of .74 (see Appendix IV for details of the study).

The PAP is composed of two subtests and three response rates. There are the two independent ($r=.27$) subtests mentioned above, i.e., the ten fact and ten attitude items on alcohol use and abuse. There are also the three possible response rates: correct, wrong, and uncertain for the fact items and positive, negative, and uncertain for the attitude items. These three response rates are based on the three possible responses that can be given on the tests: "agreement," "disagreement," and "undecided" (see sample tests in appendix II)* and are used in separate analyses because this procedure allows for examination of changes not only in information in misinformation and uncertainty of information, e.g., a gain in information may not be due to a decrease in misinformation but to a decrease in the uncertainty about the information. Thus, both the Pre and the Post are susceptible to six analyses (2 subtests and 3 response rates).

The Pap test also embodies three possible design factors for analysis: sex, source of previous alcohol education and source of familiarity with Source of familiarity with as a design factor was dropped because only 9% of the sample had been exposed to Alcohol Education from and as a factor correlated poorly with pre-test results. (see Appendix V for the results). Sources of previous alcohol education were reduced as a result of exploratory analyses from six categories to one report of receiving or not receiving alcohol education from home, herein referred to as "Alhome" (see Appendix VI for the results). Sex as a factor was eliminated due to disproportionate attrition rates among males in the sample (see sample characterization section). Thus, only Alhome survives as a design factor and is combined with the grade and group (see methodology section) to make up the overall design for examining the Pre, Post and SDS.

The Social Desirability Scale contains the same code name procedure plus 12 true-false items (Form A) that attempt to measure the conformity of the student's responses, i.e., the extent to which a student's response might be influenced by his or her desire to give socially acceptable responses rather than responses based on personal beliefs or feelings. Because of the SDS' value as an estimator of response conformity, it is used as a covariate in the evaluation design (see Appendix VII for further background and results).

III. Methodology

Twelve groups (classes) of students were tested. Two groups of students who represented the "best" students in terms of the content (A group) and two groups of students who represented the "worst" students (B group) were chosen at each grade level (7, 8, and 9th). Thus, each grade level had four groups and each category (A and B) had six groups.

The twelve groups were administered The Social Desirability Scale, the Pre-test, and the Post-test. All groups were administered The Social Desirability Scale with the Pre-test except one group (ninth grade, B group). They were mistakenly administered two Pre-tests. For them, The Social Desirability Scale was given with the Post-test.

Though all groups received the Pre-test on the same day (April 4th), only seven groups received the Post-test on the scheduled day (April 14th). Two groups (8th grade, B groups) were administered the test on the 13th, one group (7th grade, B group) on the 15th, and two groups on the 27th (7B and 9B) (see Appendix VIII for more details about the design).

IV. Sample Characterization

The present analysis is based on 255 students matched across SDS-Pre-Post who make up 17% of the total student population that participated in the alcohol education week.

Table I: Matched students categorized by grade, group and sex and compared to total population.

Grade	Total Pop.	Matched		Matched Groups		Total Matched	Matched to Total Pop.
		M	F	A	B		
		N	N	N	N		
7	505	33	47	42	38	80	16
8	548	33	57	45	45	90	16
9	470	41	44	50	35	85	18
Total:	1523	107	148	137	118	255	17

As can be seen from Table I the greatest disparity between males and females comes in the eighth grade while the greatest disparity between A and B groups comes in the ninth grade. In all, females make up 58% of the sample and A groups 54%. However, there is no major disparity between the grades and each grade is proportionately represented.

Though 255 students were matched, 288 students took the Pre-test. Thus, there were 33 students (12%) for whom there were Pre-tests without matchable SDS's or Post-tests. The greatest loss came among male and B group students, specifically among 8th grade B group males. It was found that the males lost had higher Pre-test scores (fact items, % correct) and their loss produced a significant difference in scores between males and females (females higher than males) in the matched group (N=255) which was not present in the pre-only group (N=288). Because of this discrepancy between the pre-only and the matched group, sex as a design factor was dropped. On the other hand, because the loss of B group students only increased the group effect found in the pre-only population, group as a design factor was kept. (See Appendix IX for more details).

Findings

I. Pre-test: Fact Items

Before the week's program, students on the average answered 47% of the fact items correctly, 30% incorrectly, and 23% with uncertainty.¹

Seventh graders got about 40% of the fact items right while eighth and ninth graders got approximately 50% of the items right (Table II). This increase of right answers with higher grades, however, is not due to fewer incorrect answers. In fact, all three grades answered about 30% of the items incorrectly (Table IV). Rather, it is due to students in lower grades answering more items "uncertain". Seventh graders answered about 30% of the items uncertain but eighth and ninth graders answered approximately 20% of the items "uncertain". Thus, seventh graders are less informed than eighth and ninth graders but they are not more misinformed. They are simply more uncertain about facts and, presumably, more open to further learning than students in the upper grades who are more fixed in their beliefs.

Students in A group answered more fact items correctly (52%) than students in B group (42%) (Table II): conversely, students in B group answered more fact items incorrectly (34%) than students in A group (27%) (Table IV). Thus, as expected, the "better" students were both more informed and less misinformed. Also, when the number of wrong responses is analyzed separately by groups, an opposite movement across grades is found: seventh graders in A group answered more items incorrectly than the upper-grade A groups; whereas, ninth graders in B group answered more items incorrectly than the lower-grade B groups.

Students who reported learning about alcohol at home got more fact items right (50%) than those students who reported not learning about alcohol at home (42%). However, the latter students answered more items (27%) "uncertain" than the former (21%). Thus, students who reported not learning about alcohol at home are less informed but are also more uncertain and, consequently, perhaps more open to further learning.

¹Table II, III and IV follow the overview and present the analysis of variance for each response rate with an itemization of the findings. The results are given in percentages. Since there are ten fact and ten attitude items, each ten percent equals one item, e.g., 50% = 5 items.

Table II: Pre-Test: Fact Items (% correct) with SDS as covariate grade by group by alhome.

N=255							
Group x Alhome							
Grade	A(137)		Sub-totals	B(118)		Sub-totals	Totals
	No(39) x	Yes(98) x		No(47) x	Yes(71) x		
7(80)	35.46	41.61	40.00	27.27	38.52	35.26	37.75
8(90)	51.11	56.67	54.44	40.95	47.92	44.67	49.56
9(85)	<u>57.00</u>	<u>60.00</u>	<u>59.40</u>	<u>40.00</u>	<u>48.50</u>	<u>44.86</u>	<u>53.41</u>
Total:	48.21	53.27	51.83	37.44	44.51	41.70	47.14

Source of Variation	DF	Mean Square	F	Significance of F
---------------------	----	-------------	---	-------------------

Main Effects

Grade	2	4317.88	13.79	0.001****
Group	1	5998.71	19.15	0.001****
Alhome	1	2154.92	6.88	0.009***

2-Way Interactions

Grade x Group	2	167.40	0.53	0.999
Grade x alhome	2	35.36	0.11	0.999
Group x alhome	1	250.26	0.80	0.999

3-Way Interactions

Grade x Group x Alhome	2	41.00	0.13	0.999
------------------------	---	-------	------	-------

SDS = Social Desirability Scale

Group = "Better" (=A) or "Worse" (=B) class

Alhome = Alcohol Education at Home

A = A group: "better" class

B = B group: "worse" class

No = No alhome: no alcohol education at home

Yes = Yes alhome: alcohol education at home

DF = Degrees of Freedom

F = F-ratio

Table III: Pre-Test: Fact items (% uncertain) with SDS as covariate grade by group by alhome.

N=255							
Group x Alhome							
Grade	A(137)		Sub-totals	B(118)		Sub-totals	Totals
	No(39) x	Yes(98) x		No(47) x	Yes(71) x		
7(80)	27.27	28.06	27.86	40.91	30.37	33.42	30.50
8(90)	26.11	17.04	20.67	26.19	21.67	23.78	22.22
9(85)	<u>23.00</u>	<u>14.75</u>	<u>16.40</u>	<u>21.33</u>	<u>12.00</u>	<u>16.00</u>	<u>16.24</u>
Total:	25.63	19.59	21.30	28.08	22.25	24.60	22.82

Source of Variation	DF	Mean Square	F	Significance of F
<u>Main Effects</u>				
Grade	2	36.49	11.06	0.001****
Group	1	4.29	1.30	0.254
Alhome	1	19.24	5.83	0.016**
<u>2-Way Interactions</u>				
Grade x Group	2	4.88	1.48	0.229
Grade x Alhome	1	.81	0.24	0.999
Group x Alhome	1	.67	0.20	0.999
<u>3-Way Interactions</u>				
Grade x Group x Alhome	2	2.94	0.89	0.999

SDS = Social Desirability Scale

Group = "better" (=A) or "worse" (=B) class

Alhome = Alcohol Education at Home

A = A group: "better" class

B = B group: "worse" class

No = No alhome: No alcohol education at home

Yes = Yes alhome: alcohol education at home

DF = Degrees of Freedom

F = F-ratio

Table IV: Pre-Test: Fact Items (% wrong) with SDS as covariate grade by group by alhome.

N=255							
Group x Alhome							
Grade	A(137)		Sub-totals	B(118)		Sub-totals	Total
	No(39) <u>x</u>	Yes(98) <u>x</u>		No(47) <u>x</u>	Yes(71) <u>x</u>		
7(80)	37.27	30.32	32.14	31.82	31.11	31.32	31.75
8(90)	22.78	26.30	24.89	32.86	30.42	31.56	28.22
9(85)	<u>20.00</u>	<u>25.25</u>	<u>24.20</u>	<u>38.67</u>	<u>39.50</u>	<u>39.14</u>	<u>30.35</u>
Total:	26.15	27.14	26.86	34.47	33.24	33.73	30.04

Source of Variation	DF	Mean Square	F	Significance of F
<u>Main Effects</u>				
Grade	2	232.59	1.16	0.316
Group	1	3219.41	16.03	0.001****
Alhome	1	6.52	0.03	0.999
<u>2-Way Interactions</u>				
Grade x Group	2	1207.09	6.01	0.003***
Grade x Alhome	2	191.96	0.96	0.999
Group x Alhome	1	58.04	0.29	0.999
<u>3-Way Interactions</u>				
Grade x Group x Alhome	2	193.95	0.97	0.999

SDS = Social Desirability Scale

Group = "better" (=A) or "worse" (=B) class

Alhome = Alcohol Education at Home

A = A group: "better" class

B = B group: "worse" class

No = No alhome: No alcohol education at home

Yes = Yes alhome: alcohol education at home

DF = Degrees of Freedom

F = F-ratio

Pre-test: Fact Items -- Itemized Findings

Table II:

Correct

1. Students in the higher grades got more items right than students in the lower grades.
2. B group students gave fewer correct responses
3. Students who report receiving no alcohol education at home gave fewer correct responses

Table III:

Uncertain

4. Students in lower grades more frequently responded "uncertain"
5. Students who reported receiving no alcohol education at home more frequently responded "uncertain."

Table IV:

Wrong

6. B group students more frequently chose wrong responses.
7. For A group students, the number of wrong responses decreases in higher grades. B group students, however, show a strong increase in the number of incorrect responses from 8th to 9th grades.

II. Pre-test: Attitude Items

Prior to the week's program, students answered on the average 70% of the attitude items positively, 22% negatively, and 8% with uncertainty. Students, thus, entered the program with both high positive attitudes and high certainty about their attitudes.

Ninth graders gave higher positive attitude responses (74%) than eighth (67%) and seventh graders (69%) (Table V) but there were no significant grade differences in uncertain or negative responses. However, ninth graders tended to have fewer uncertain and negative responses.

A group students (73%) gave more positive responses than B group students (67%) while B group students (24%) gave more negative responses than A group students (20%) (Table V & VII). However, for A group students, ninth graders gave more positive responses than the others, whereas, for B group students, seventh graders gave more positive responses than the others (Table V). Correspondingly, for A group students, seventh graders gave more negative responses than the others; whereas, for B group students, ninth graders gave more negative responses than the others. A group students, therefore, tend to become more positive and less negative as they move from the seventh to the ninth grade; whereas, the opposite is true of B group students, i.e., they become less positive and more negative as they advance in grades. This finding parallels that found for fact items.

Students who reported learning about alcohol from home (73%) gave more positive responses than those who reported not learning from home (66%) (Table V); while at the same time, students who reported not learning about alcohol at home (1.1%) gave more uncertain responses than those who reported learning from home (7%) (Table VI). Concerning negative responses, A group students who reported learning about alcohol from home were less negative than those who reported not learning from home, while, the opposite was true for B group students (Table VII).

In sum, students with alhome were more positive and certain than students without alhome; however, B group students with alhome were more negative than B group students without it which is contrary to what was found for A group students and in general for students with alhome.

Table V: Pre-test: attitude items (% correct) with SDS as covariate grade by group by alhome.

N=255							
<u>Group x Alhome</u>							
<u>Grade</u>	A(137)		Sub- totals <u>x</u>	B(118)		Sub- totals <u>x</u>	Total <u>x</u>
	No(39) <u>x</u>	Yes(98) <u>x</u>		No(47) <u>x</u>	Yes(71) <u>x</u>		
7(80)	64.55	67.03	66.38	74.55	71.04	73.05	69.08
8(90)	64.44	72.96	69.56	60.00	69.13	64.87	67.21
9(85)	<u>72.80</u>	<u>83.10</u>	<u>83.04</u>	<u>63.93</u>	<u>65.50</u>	<u>64.83</u>	<u>74.37</u>
Total:	66.61	75.22	72.77	64.66	68.83	67.17	70.18

<u>Source of Variation</u>	<u>DF</u>	<u>Mean Square</u>	<u>F</u>	<u>Significance of F</u>			
<u>Main Effects</u>							
Grade	2	874.94	2.97	0.052*			
Group	1	1278.83	4.33	0.036**			
Alhome	1	1957.67	6.63	0.010***			
<u>2-Way Interactions</u>							
Grade x Group	2	2099.32	7.11	0.001****			
Grade x Alhome	2	409.45	1.39	0.250			
Group x Alhome	1	235.88	0.80	0.999			
<u>3-Way Interactions</u>							
Grade x Group x Alhome	2	112.44	0.38	0.999			

SDS = Social Desirability Scale

Group = "better" (=A) or "worse" (=B) class

Alhome = Alcohol Education at Home

A = A group: "better" class

B = B group: "worse" class

No = No alhome: No alcohol education at home

Yes = Yes alhome: alcohol education at home

DF = Degrees of Freedom

F = F-ratio

Table VI: Pre-test: attitude items (% uncertain) with SDS as covariate grade by group by alhome.

N=255							
<u>Group x Alhome</u>							
<u>Grade</u>	A(137)		Sub- totals <u>x</u>	B(118)		Sub- totals <u>x</u>	Total <u>x</u>
	No(39) <u>x</u>	Yes(98) <u>x</u>		No(47) <u>x</u>	Yes(71) <u>x</u>		
7(80)	8.18	10.00	9.52	9.09	8.15	8.42	9.00
8(90)	11.11	5.93	8.00	12.86	6.67	9.56	8.78
9(85)	<u>5.00</u>	<u>3.50</u>	<u>3.80</u>	<u>13.33</u>	<u>4.00</u>	<u>8.00</u>	<u>5.53</u>
Total:	8.72	6.23	7.00	12.13	6.48	8.80	7.77

<u>Source of Variation</u>	<u>DF</u>	<u>Mean Square</u>	<u>F</u>	<u>Significance of F</u>			
<u>Main Effects</u>							
Grade	2	2.30	1.63	0.197			
Group	1	1.70	1.20	0.274			
Alhome	1	6.78	4.79	0.028**			
<u>2-Way Interactions</u>							
Grade x Group	2	0.30	0.21	0.999			
Grade x Alhome	2	2.11	1.49	0.226			
Group x Alhome	1	2.09	1.48	0.223			
<u>3-Way Interactions</u>							
Grade x Group x Alhome	2	0.75	0.53	0.999			

SDS = Social Desirability Scale

Group = "better" (=A) or "worse" (=B) class

Alhome = Alcohol Education at Home

A = A group: "better" class

B = B group: "worse" class

No = No alhome: No alcohol education at home

Yes = Yes alhome: alcohol education at home

DF = Degrees of Freedom

F = F-ratio

Table VII: Pre-test: attitude items (% wrong) with SDS as covariate grade by group by alhome.

N=255

Group x Alhome

<u>Grade</u>	<u>A(137)</u>		<u>Sub-totals</u> <u>x</u>	<u>B(118)</u>		<u>Sub-totals</u> <u>x</u>	<u>Total</u> <u>x</u>
	<u>No(39)</u> <u>x</u>	<u>Yes(98)</u> <u>x</u>		<u>No(47)</u> <u>x</u>	<u>Yes(71)</u> <u>x</u>		
7(80)	27.27	22.90	24.05	16.36	20.74	19.40	21.88
8(90)	24.44	21.11	22.44	27.14	24.17	25.56	24.00
9(85)	<u>22.00</u>	<u>13.25</u>	<u>15.00</u>	<u>22.67</u>	<u>30.50</u>	<u>27.14</u>	<u>20.00</u>
Total:	24.61	18.47	20.22	23.19	24.65	24.07	22.00

<u>Source of Variation</u>	<u>DF</u>	<u>Mean Square</u>	<u>F</u>	<u>Significance of F</u>
----------------------------	-----------	--------------------	----------	--------------------------

Main Effects

Grade	2	273.13	1.12	0.330
Group	1	795.08	3.25	0.069*
Alhome	1	176.98	.72	0.999

2-Way Interactions

Grade x Group	2	1340.26	5.48	0.005***
Grade x Alhome	2	60.35	.25	0.999
Group x Alhome	1	804.33	3.29	0.068*

3-Way Interactions

Grade x Group x Alhome	2	308.56	1.26	0.285
------------------------	---	--------	------	-------

SDS = Social Desirability Scale

Group = "better" (=A) or "worse" (=B) class

Alhome = Alcohol Education at Home

A = A group: "better" class

B = B group: "worse" class

No = No alhome: No alcohol education at home

Yes = Yes alhome: alcohol education at home

DF = Degrees of Freedom

F = F-ratio

Pre-test: Attitude Items - Itemized Findings

Table V:

Positive

1. Ninth graders more frequently gave the appropriate response.
2. Students who reported having alcohol education at home more frequently chose the appropriate response.
3. A group students in higher grades more frequently selected the appropriate response.
4. A group students in higher grades and B group students in lower grades more frequently gave the appropriate response.

Table VI:

Uncertain

5. Students who reported no alcohol education at home more frequently responded "uncertain".

Table VII:

Negative

6. A group students less frequently picked inappropriate responses.
7. A group students in higher grades and B group students in lower grades less frequently selected inappropriate responses.
8. A group students who reported having alcohol education at home and B group students who reported having no alcohol education less frequently gave inappropriate responses.

III. Pre to Post Changes: Fact Items

In general, there was a significant increase in correct responses (13.5%) pre to post (Table VIII). This was due not to a decrease in wrong responses (+0.71%) but to a decrease in uncertainty responses (-14.2%) (Tables IX & X).

Though the seventh grade got about 10% fewer items correct on the pre than the other grades, all grades got approximately the same number of items correct on the post (60%). Thus, seventh graders had the greatest increase in correct responses (22.7%) Seventh graders also had the greatest decrease in uncertainty responses (-20.9%). Except for the seventh grade A group without alhome which also had a 11.8% drop in incorrect responses, most of the correct score gains in the seventh grade resulted from the significant decrease in uncertainty responses. Eighth graders also had a large decrease in uncertainty responses but they had a significant increase in incorrect responses. Thus, a significant part of the seventh grade response moved from uncertainty to correct while a significant part of the eighth grade response moved from uncertainty to incorrect.

Although for A group students there was a gradual drop in uncertainty responses from the ninth to the seventh grade, for B group students there was a significant drop from the eighth to the seventh grade especially among seventh graders without alhome. On the other hand, while for B group eighth graders there was a slighter gain in incorrect responses compared to the other grades, for A group eighth graders there was a significantly larger gain in incorrect responses compared to the other grades.

Students who reported not learning about alcohol from home got more correct responses and had fewer uncertainty responses pre to post than those students who reported learning about alcohol from home. Seventh graders who reported not learning about alcohol at home had most gains in correct responses.

Table VIII : Gain Scores of Fact Items (% correct) grade by group by alhome.

N=255							
Group x Alhome							
Grade	A(137) No(39) <u>x</u>	Yes(98) <u>x</u>	Sub- totals <u>x</u>	B(118) No(47) <u>x</u>	Yes(71) <u>x</u>	Sub- totals <u>x</u>	Total <u>x</u>
7(80)	33.55	20.32	23.79	30.91	17.74	21.55	22.73
8(90)	12.78	5.93	8.67	7.50	14.76	10.89	9.78
9(85)	<u>9.00</u>	<u>11.75</u>	<u>11.20</u>	<u>4.00</u>	<u>6.45</u>	<u>5.40</u>	<u>8.81</u>
Total:	17.67	12.86	14.23	11.86	13.55	12.70	13.52

Source of Variation	DF	Mean Square	F	Significance of F			
Time	1	22614.87	141.75	.001****			
Time x Grade	2	3323.90	20.83	.001****			
Time x Group	1	105.79	0.66	.416			
Time x Alhome	1	923.54	5.79	.017**			
Time x Grade x Group	2	109.39	0.69	.505			
Time x Grade x Alhome	2	564.01	3.54	.031**			
Time x Group x Alhome	1	0.54	0.00	.999			
Time x Grade x							
Group x Alhome	2	0.00	0.00	.999			

Group = "better" (=A) or "worse" (=B) class

Alhome = Alcohol Education at Home

A = A group: "better" class

B = B group: "worse" class

No = No alhome: No alcohol education at home

Yes = Yes alhome: alcohol education at home

DF = Degrees of Freedom

F = F-ratio

Table IX : Gain Scores of Fact Items (% uncertain) grade by group by alhome.

N=255

Group x Alhome

<u>Grade</u>	<u>A(137)</u>		<u>Sub- totals</u> <u>x</u>	<u>B(118)</u>		<u>Sub- totals</u> <u>x</u>	<u>Total</u> <u>x</u>
	<u>No(39)</u> <u>x</u>	<u>Yes(98)</u> <u>x</u>		<u>No(47)</u> <u>x</u>	<u>Yes(71)</u> <u>x</u>		
7(80)	-21.82	-18.39	-19.29	-33.64	-18.15	-22.63	-20.88
8(90)	-18.89	-13.33	-15.56	-12.86	-10.00	-11.33	-13.44
9(85)	<u>-15.00</u>	<u>- 9.50</u>	<u>-10.60</u>	<u>- 4.67</u>	<u>- 7.50</u>	<u>- 6.29</u>	<u>- 8.82</u>
Total:	-18.72	-13.37	-15.18	-15.11	-12.40	-12.81	-14.24

<u>Source of Variation</u>	<u>DF</u>	<u>Mean Square</u>	<u>F</u>	<u>Significance of F</u>
Time	1	25019.26	186.38	.001****
Time x Grade	2	1764.60	13.15	.001****
Time x Group	1	75.85	0.57	.453
Time x Alhome	1	666.91	4.97	.027**
Time x Grade x Group	2	377.72	2.81	.062*
Time x Grade x Alhome	2	151.04	1.13	.326
Time x Group x Alhome	1	0.82	0.01	.938
Time x Grade x Group x Alhome	2	246.46	1.84	.162

Group = "better" (=A) or "worse" (=B) class

Alhome = Alcohol Education at Home

A = A group: "better" class

B = B group: "worse" class

No = No alhome: No alcohol education at home

Yes = Yes alhome: alcohol education at home

DF = Degrees of Freedom

F = F-ratio

Table X : Gain Scores of Fact Items (% wrong) grade by group by alhome.

N=255							
Group X Alhome							
Grade	A(137)		Sub-totals	B(118)		Sub-totals	Total
	No(39) <u>x</u>	Yes(98) <u>x</u>		No(47) <u>x</u>	Yes(71) <u>x</u>		
7(80)	-11.82	-1.94	-4.52	2.73	0.37	1.05	-1.88
8(90)	6.11	7.41	6.89	-1.91	2.50	0.44	3.67
9(85)	<u>6.00</u>	<u>-2.25</u>	<u>-0.60</u>	<u>0.67</u>	<u>1.00</u>	<u>0.85</u>	<u>9.00</u>
Total:	1.02	.51	0.66	0.00	1.27	0.77	0.71
Source of Variation	DF	Mean Square	F	Significance of F			
Time	1	58.52	0.46	.498			
Time x Grade	2	351.03	2.77	.065*			
Time x Group	1	2.37	0.02	.892			
Time x Alhome	1	20.74	0.16	.686			
Time x Grade x Group	2	504.98	3.98	.020**			
Time x Grade x Alhome	2	158.40	1.25	.289			
Time x Group x Alhome	1	0.38	0.00	.956			
Time x Grade x							
Group x Alhome	2	258.89	2.04	.132			

Group = "better" (=A) or "worse" (=B) class
 Alhome = Alcohol Education at Home
 A = A group: "better" class
 B = B group: "worse" class
 No = No alhome: No alcohol education at home
 Yes = Yes alhome: alcohol education at home
 DF = Degrees of Freedom
 F = F-ratio

Pre to Post Changes: Fact Items--Itemized Findings

Table VIII

Correct

1. Overall there were significant gains pre to post.
2. Grade 7 gained significantly more.
3. Students who received no alcohol education at home gained more than those who did.
4. Seventh graders who received no alcohol education at home gained more than any other grade by alhome group. (They start lowest and end up second only to ninth graders who reported receiving alcohol education at home).

Table IX

Uncertain

5. There was significantly less uncertainty on the post than on the pre.
6. Pre to post, seventh graders became significantly less uncertain than eighth and ninth graders.
7. Students with alhome became significantly less uncertain pre to post than students without alhome.
8. In the seventh grade A and B groups lose uncertainty at approximately the same rate, but in eighth and ninth grades the rate of loss is higher for A groups than for B groups.

Table X

Wrong

9. There was no significant difference pre to post.
10. Only eighth graders gained pre to post.
11. Eighth graders A group students had more incorrect responses pre to post than any other grade by group combination.

IV. Pre to Post Changes: Attitude Items

In general, there was a small but significant increase of positive responses (2.8%) and decrease of uncertainty responses (2.7%) pre to post. There was no difference pre to post in negative responses. Like the knowledge items, the negative item level remained constant pre to post while the positive item level increased and the uncertainty item level decreased. Thus, attitudes improved only in the sense of becoming less uncertain and not in the sense of becoming less negative.

Though the gains for the attitude items were much smaller than those for the negative items, positive scores began near the top of the scale and 23% higher than the correct scores. The possibility of this ceiling effect may help to explain the slightness of the gains.

There were no significant differences according to grade, group, or alhome. In other words, people tended to change equally no matter what category they belonged to.

Table XI : Gain Scores of Attitude Items (% Positive) a grade by group by alhome.

N=255							
Group x Alhome							
Grade	A(137)		Sub-Totals	B(118)		Sub-totals	Totals
	No(39) <u>x</u>	Yes(98) <u>x</u>		No(47) <u>x</u>	Yes(71) <u>x</u>		
7(80)	0.91	8.10	6.21	6.18	5.82	5.92	6.08
8(90)	4.39	-1.89	0.62	5.19	-2.08	1.31	0.97
9(85)	<u>4.10</u>	<u>0.43</u>	<u>1.16</u>	<u>1.93</u>	<u>2.00</u>	<u>1.97</u>	<u>1.49</u>
Total:	3.33	2.22	2.54	4.38	2.07	3.00	2.75

Source of Variation	DF	Mean Square	F	Significance of F
Time	1	911.80	6.04	.015**
Time x Grade	2	148.95	0.99	.375
Time x Group	1	6.30	0.04	.838
Time x Alhome	1	78.83	0.52	.471
Time x Grade x Group	2	7.59	0.05	.951
Time x Grade x Alhome	2	230.93	1.53	.219
Time x Group x Alhome	1	17.54	0.12	.734
Time x Grade x				
Group x Alhome	2	70.77	0.47	.627

Group = "better" (=A) or "worse" (=B) class

Alhome = Alcohol Education at Home

A = A group: "better" class

B = B group: "worse" class

No = No alhome: No alcohol education at home

Yes = Yes alhome: alcohol education at home

DF = Degrees of Freedom

F = F-ratio

Table XII : Gain Scores of Attitude Items (% uncertain) grade by group by alhome.

N=255							
Group x Alhome							
Grade	A(137)		Sub-totals	B(118)		Sub-totals	Total
	No(39) x	Yes(98) x		No(47) x	Yes(71) x		
7(80)	-1.82	-4.84	-4.05	-5.46	-2.59	-3.42	-3.75
8(90)	-6.11	-4.07	-4.89	-1.91	-1.25	-1.56	-3.22
9(85)	-3.00	-1.25	-1.60	-3.33	1.50	-0.57	-1.18
Total:	-4.10	-3.16	-3.43	-3.19	-.98	-1.87	-2.71
Source	Variation	DF	Mean Square	F	Significance of f		
Time		1	863.16	13.70	.001****		
Time x Grade		2	47.74	0.76	.470		
Time x Group		1	48.11	0.76	.383		
Time x Alhome		1	61.59	0.98	.324		
Time x Grade x Group		2	39.53	0.63	.535		
Time x Grade x Alhome		2	25.47	0.40	.668		
Time x Group x Alhome		1	42.62	0.68	.412		
Time x Grade x							
Group x Alhome		2	29.85	0.47	.623		

Group = "better" (=A) or "worse" (=B) class

Alhome = Alcohol Education at Home

A = A group: "better" class

B = B group: "worse" class

No = No alhome: No alcohol education at home

Yes = Yes alhome: alcohol education at home

DF = Degrees of Freedom

F = F-ratio

Table XIII: Gain Scores of Attitude Items (% Negative) grade by group by alhome.

N=255							
Group x Alhome							
Grade	A(137)		Sub-totals	B(118)		Sub-totals	Totals
	No(39) x	Yes(98) x		No(47) x	Yes(71) x		
7(80)	.91	-3.23	-2.14	-.91	-3.33	-2.63	-2.38
8(90)	1.67	5.93	4.22	-3.33	3.33	0.22	2.22
9(85)	-1.00	0.75	0.40	1.33	-3.50	-1.43	-0.35
Total:	.47	.92	.87	-1.28	-.98	-1.19	-0.08

Source of Variation	DF	Mean Square	F	Significance of F
Time	1	1.52	0.01	.914
Time x Grade	2	117.65	0.91	.406
Time x Group	1	96.81	0.74	.389
Time x Alhome	1	1.12	0.01	.926
Time x Grade x Group	2	23.89	0.18	.832
Time x Grade x Alhome	2	190.54	1.47	.233
Time x Group x Alhome	1	4.60	0.04	.851
Time x Grade x Group x Alhome	2	55.506	0.43	.653

Group = "better" (=A) or "worse" (=B) class
 Alhome = Alcohol Education at Home
 A = A group: "better" class
 B = B group: "worse" class
 No = No alhome: No alcohol education at home
 Yes = Yes alhome: alcohol education at home
 DF = Degrees of Freedom
 F = F-ratio

Pre to Post Changes: Attitude Items -- Itemized Findings

Table XI

Positive

1. A small but significant gain pre to post.

Table XII

Uncertain

2. A small but significant decrease pre to post.

Table XIII

Negative

3. No difference pre to post.

Discussion and Conclusions

Alcohol Education Week program did change students' knowledges and attitudes about alcohol use and abuse. The nature of this change, however, needs to be stated precisely. Students did get 10% more fact items right on the post test than on the pre-test. Students, however, did not make fewer "myth" responses to fact items. The week's program, therefore, was effective in making students change from uncertain to right responses but it was ineffective in altering their wrong or "myth" belief responses. The false beliefs that students entered the program with were not changed or altered in any significant way. What the program was able to accomplish was to help students clarify their uncertainty about their beliefs or knowledges.

In terms of attitudes, students had more positive attitudes after the program than before. These positive gains, however, were slight. It has already been pointed out that there might have been a ceiling effect operating given the high positive attitude scores on the pre-test. However, like the wrong responses on the fact items, negative responses on the attitude items were not significantly decreased. This finding, therefore, again supports the above interpretation that the program was able to influence students who were uncertain in their attitudes but not those who were certain in their attitudes prior to instruction.

Three qualifications need to be made concerning the clarification of uncertainty effect that was observed in the present study. First, the effect was not consistent across all grades. Second, there was tentative evidence that the effect might be transitory. And third, there was also tentative evidence suggested by cross-sectional analyses of the pre-test that the effect might operate in the reverse direction for an important part of the student population.

To elaborate on these points: Eighth graders, and specifically eighth grade A group students, had their uncertainty clarified less than other students who participated in the study. A significant number of the eighth graders' uncertain responses on the pre-test changed to incorrect responses on the post-test. Eighth graders were also the only students who had a negative gain in attitude scores. Why these outcomes occurred is unclear. However, it does suggest that they may have received a treatment different than other students in some important way, or simply did not attend sessions, or were somehow affected negatively by the sessions they attended.

Concerning the second qualification (the transitoriness of effects), two groups who were fortuitously administered the post-test two weeks later than the other groups not only tended to respond less correctly and positively to items, but they also tended to respond more incorrectly and negatively (see Appendix VIII).

Finally, cross-sectional analysis of the pre-test suggests that 7th grade B group students might, over time, be the group of students who are most vulnerable to negative or myth-oriented changes, i.e., though they begin most open-minded, they end up in the ninth grade most myth-oriented and negative. The latter statement is, of course, predicted on the assumption that the cross-sectional data presented in Table XIV on the following page can be interpreted longitudinally. Table XIV summarizes the pre-test fact and attitude mean scores according to the categories and response rates. If the wrong responses are examined for both facts and attitudes, it is observed that for A groups the wrong responses decrease linearly in all cases with advancement in grade and that for B groups they increase linearly except for one group. What this contraflux suggests, is that in most cases B group students become more myth-oriented and negative as they advance in grades while A group students become less so.

The only available information that might supply an explanation to this finding is found in the sources of previous alcohol education (see Appendix VI). Significantly more B group students mention receiving alcohol education from friends than A group students while significantly more A group students mention receiving alcohol education from home and church or synagogue. What these differences suggest is that as B group students advance in grades they might turn less to the advice of their families and churches or synagogues and more to that of their friends. The advice B group students receive from friends, however, must be both negative and myth-laden if these friends are actually the true source of instruction. High-success intervention points, therefore, may not be the same for all students or kinds of students if differential developmental and/or sociological factors are operational and influential in the acculturation process and this point needs further intensive investigation.

In summary, then, the major findings from the present study would seem to be (1) that an alcohol education week is more able to help students with uncertain beliefs and ambivalent attitudes (or no attitudes) than students with false beliefs and negative attitudes but perhaps only minimally or transitorily (i.e., the clarification of uncertainty effect), and (2) that for a certain subgroup of students (upper grade B group students) a more prolonged, intensive, systematic, and perhaps community-based approach might be needed to affect the positive changes desired.

Table XIV: Pre-test: Fact and Attitude $\bar{x}$ scores categorized by grade, group, alhome, and response rate.

Group x Alhome x Response Rate												
Fact	A						B					
	NO			YES			NO			YES		
Grade	C	U	W	C	U	W	C	U	W	C	U	W
7	35.5	27.3	37.3	41.6	28.1	30.3	27.3	41.0	31.8	38.5	30.4	31.1
8	51.1	26.1	22.8	56.7	17.0	26.3	41.0	26.2	32.9	47.9	21.7	30.4
9	57.0	23.0	20.0	60.0	14.8	25.3	40.0	21.3	38.7	48.5	12.0	39.5

Attitude	P			U			N			P		
	C	U	W	C	U	W	C	U	W	C	U	W
7	64.5	8.2	27.3	67.0	10.0	22.9	74.5	9.1	16.4	71.0	8.2	20.7
8	64.4	11.1	24.4	73.0	5.9	21.1	60.0	12.9	27.1	69.1	6.7	24.2
9	72.8	5.0	22.0	83.1	3.5	13.3	63.9	13.3	22.7	65.5	4.0	30.5

Sources	Church or Synagogue			Home Church or Synagogue			Friends			Friends Home		

SDS = Social Desirability Scale
 Group = "better" (=A) or "worse" (=B) class
 Alhome = Alcohol Education at Home
 A = A group: "better" class
 B = B group: "worse" class
 No = No alhome: no alcohol education at home
 Yes = Yes alhome: alcohol education at home
 DF = Degrees of Freedom
 F = F-ratio

C = correct response
 U = uncertain response
 W = wrong response
 P = positive response
 N = negative response

APPENDIX I

336

Appendix I: Program Description

TO: SCIENCE FACULTY
HEALTH STAFF:
ADMINISTRATORS

FROM:

SUBJECT: ALCOHOL EDUCATION PROGRAM



APRIL 4, 1977 - MONDAY

1. Science and Health Staff prepare students of week's program goals and responsibilities.
2. A pre-test will be given to 12 science classes to evaluate program. Test is developed by Caspar.
3. 11 - 1 P.M. planning details - participants will meet in the Conference Room to coordinate efforts - Rap leaders, speakers, school staff.

APRIL 5, and 6, 1977 - TUESDAY AND WEDNESDAY

1. Science and Health classes will go to the auditorium during regular periods 1-7 (eat lunch). Students and faculty will see one of 8 films, a speaker, or a skit.

<u>PERIOD TIME</u>	<u>TUESDAY</u>	<u>WEDNESDAY</u>
1 8:09	<u>A Film</u>	<u>Court View</u>
2 8:56	<u>A Skit</u>	<u>Court View</u>
3 9:43		<u>A Film</u>
4. 10:30		<u>A Film</u>
5 11:17	<u>A Film</u>	
6 12:41	<u>A Film</u>	
7 1:28	<u>A Film</u>	<u>A Skit</u>

* Student in charge to introduce program.

2. Films are youth selected that Council on Alcoholism have found successful with junior high school audiences.
3. Students will introduce day's program and goals for 3 day program. Students have been meeting Mondays to plan this program with coordination.
4. staff will focus on youth programs as an alternative to partying.
5. Probation Officer for County Court will focus on the community health problem that alcohol abuse presents to youth.
6. (a based staff training group) will present an overview of successful prevention and rehabilitation programs dealing with youth.

APRIL 7, 1977 - THURSDAY

Students and faculty of science and health classes will meet in science classrooms; B-37, B-36, B-35, B-34, B-33, B-32, B-31 and B-30. It may not be possible to staff all 8 classrooms every period; if not the priority and there for the location to take classes will be B-37 to B-30. Classes meeting in A-15, B-26-28 are asked to divide among first 6 science classes (B-37--B-32).

Program will be a structured Rap session led by staff, youth program counselor, student leader and participating teacher. Teachers, students and volunteer specialists have had some program sensitizing.

APRIL 11, 1977 - MONDAY - EVALUATION

1:00 - 2:45 P.M. Participants of program (speakers, students, youth staff, faculty) are asked to drop in and discuss both program evaluation and design follow-up programs that resulted from evaluation. Adults will meet at 1 P.M. in Conference Room and students will join at 2:15 P.M. Faculty are encouraged to drop-in with suggestions.

APRIL 14, 1977 - THURSDAY

A post-test will be given to the same twelve classes that took pre-test. A growth analysis will be done by CASPAR'S computer and staff.

MARCH 31, 1977

APPENDIX II

DATE: / / /

Directions: To create your own CASPAR CODE NAME, please read each rule carefully and print the correct letter for each on the left-hand line.

PLEASE PRINT CLEARLY AND IN CAPITAL LETTERS

- _____ First letter of your middle name (if no middle name, write z)
- _____ First letter of month you were born in
- _____ First letter of your sex: Male or Female
- _____ First letter of the name of your street
- _____ First letter of your mother's first name (if unknown, write x)
-

Directions: Please read each of the sentences below. If you feel that the sentence is true about you, circle the letter T next to the sentence. The letter T stands for True. If you feel that the sentence is not true about you, circle the letter F next to the sentence. The letter F stands for False. Please remember that there are no right or wrong answers for any of these sentences. The sentence either is true about you or is not. If you have any questions at any time raise your hand and someone will come and help you.

- T F 1. I am always respectful to older people.
- T F 2. Sometimes I do not feel like doing what my teachers want me to do.
- T F 3. Sometimes I have felt like throwing things or breaking them.
- T F 4. I never act "fresh" or "talk back" to my parents.
- T F 5. When I make a mistake, I always admit that I am wrong.
- T F 6. I sometimes feel like making fun of other people.
- T F 7. I always wash my hands before every meal.
- T F 8. Sometimes, I wish I could just "mess around" instead of having to go to school.
- T F 9. I have never been tempted to break a rule or a law.
- T F 10. Sometimes I dislike helping my parents even though I know they need my help around the house.
- T F 11. Sometimes I say things just to impress my friends.
- T F 12. I never shout when I feel angry.

DATE: ____/____/____

PERIOD: _____

Directions: To create your CODE NAME, please read each rule carefully and print the correct letter for each on the left-hand line.

PLEASE PRINT CLEARLY AND IN CAPITAL LETTERS

____ First letter of your middle name (if no middle name, write "z")

____ First letter of month you were born in

____ First letter of your sex: Male or Female

____ First letter of the name of your street

____ First letter of your mother's first name (if unknown, write "x")

The quiz is not a test and you will not be given a mark on it. This quiz is to find out what people in the class are thinking about alcohol and alcoholism. For each statement, circle A if you agree with it, D if you disagree, and ? if you don't know or are undecided.

- A D ? 1. A 12 ounce bottle of beer has the same amount of alcohol as a 1½ ounce shot of whiskey.
- A D ? 2. If a person is drunk, coffee can help him or her sober up.
- A D ? 3. There are times it's O.K. for teenagers to have a drink.
- A D ? 4. The same amount of alcohol will usually affect a 100 pound person more than a 150 pound person.
- A D ? 5. As long as a person keeps out of trouble, it's all right for that person to drink as much as he or she wishes.
- A D ? 6. Parents should not drink in front of their children or let their children drink in the home.
- A D ? 7. A good reason for drinking is to help a person forget problems and hassles.
- A D ? 8. There is nothing wrong with having a little wine or beer with a meal to make the meal more enjoyable.
- A D ? 9. A person can have a drink everyday and be a responsible drinker.
- A D ? 10. If you drink only beer, you can't become an alcoholic.
- A D ? 11. Parents should show their disapproval everytime their son or daughter drinks too much.
- A D ? 12. A good reason for drinking is to help a person feel less nervous and shy on a date.

- A D ? 13. Most alcoholics are poor old men who live on the streets.
- A D ? 14. Alateen is for children whose parents have a drinking problem.
- A D ? 15. Alcohol will affect you less after a meal than before a meal.
- A D ? 16. Normally, when people drink, they tend to lose their physical co-ordination before they lose their judgement or concentration.
- A D ? 17. If a person has a drink two or three times a week, that person's brain, liver or stomach will probably be damaged.
- A D ? 18. People who don't drink are most likely afraid to enjoy themselves.
- A D ? 19. If someone close to you has a drinking problem it's best to tell someone you trust about it.
- A D ? 20. It is worse for a girl to drink than it is for a boy.
- A D ? 21. I know some people who drink a lot.

Have you learned about alcohol and alcoholism before?

Please circle either yes or no.

NO	YES	in school
NO	YES	at home
NO	YES	from friends
NO	YES	from a youth staff member
NO	YES	from Church or Synagogue programs
NO	YES	other _____

Have you heard of _____ before?

Please circle either yes or no.

NO	YES	in school
NO	YES	at home
NO	YES	from friends
NO	YES	from a youth staff member
NO	YES	from Church or Synagogue programs
NO	YES	other _____

APPENDIX III

APPENDIX IIIA

Parts 1 and 2 of the PAP are identical to those used in Cycle IV of the CASPAR Alcohol Education Curriculum. (The curriculum was implemented in four separate phases or cycles. This procedure allowed for the evolutionary development of instruments).

Parts 3 and 4 of the PAP are identical in form but not content to the PAP's used in cycle 1. In respect to sources of previous Alcohol Education, "CASPAR" was changed to and "from summer camp" to "in church or synagogue." In respect to sources of program familiarity, "CASPAR" was changed to and "from summer camp" to "in church or synagogue."

Part 2 is composed of two subtests and they are as follows (key answered placed in parentheses):

Fact Items

1. (A) D ? A 12 ounce bottle of beer has the same amount of alcohol as a 1½ ounce shot of whiskey.
2. A (D) ? If a person is drunk, coffee can help him or her sober up.
3. (A) D ? The same amount of alcohol will usually affect a 100 pound person more than a 150 pound person.
4. (A) D ? A person can have a drink everyday and be a responsible drinker.
5. A (D) ? If you drink only beer, you can't become an alcoholic.
6. A (D) ? Most alcoholics are poor old men who live on the streets.
7. (A) D ? Alateen is for children whose parents have a drinking problem.
8. (A) D ? Alcohol will affect you less after a meal than before a meal.
9. A (D) ? Normally, when people drink, they tend to lose their physical co-ordination before they lose their judgement or concentration.
10. A (D) ? If a person has a drink two or three times a week, that person's brain, liver, or stomach will probably be damaged.

Attitude Items

1. (A) D ? There are times its O.K. for teenagers to have a drink.
2. A (D) ? As long as a person keeps out of trouble it's all right for that person to drink as much as he or she wishes.

Attitude Items (cont'd)

3. A (D) ? Parents should not drink in front of their children or let their children drink in the home.
4. A (D) ? A good reason for drinking is to help a person forget problems and hassles.
5. (A) D ? There is nothing wrong with having a little wine or beer with a meal to make the meal enjoyable
6. (A) D ? Parents should show their disapproval everytime their son or daughter drinks too much.
7. A (D) ? A good reason for drinking is to help a person feel less nervous and shy on a date.
8. A (D) ? People who don't drink are most likely afraid to enjoy themselves.
9. (A) D ? If a person close to you has a drinking problem its best to tell someone you trust about it.
10. A (D) ? Its worse for a girl to drink than it is for a boy.

Perceptual Items

1. A D ? I know some people who drink a lot.

Appendix IIIB: Item Analysis

<u>Fact Item</u>	<u>% Correct</u>			<u>% Uncertain & Incorrect</u>		
	Pre	Post	Change	Pre	Post	Change
1	30.6	68.6	38.0	69.4	31.4	-38.0
2	27.1	54.9	27.8	72.9	45.1	-27.8
3	38.0	45.9	7.9	62.0	54.1	- 7.9
4	54.9	71.0	16.1	45.1	29.0	-16.1
5	79.6	84.7	5.1	20.4	15.3	- 5.1
6	79.6	85.9	6.3	20.4	14.1	- 6.3
7	41.2	70.6	29.4	58.8	29.4	-29.4
8	47.1	56.5	9.4	52.9	43.5	- 9.4
9	23.9	26.3	2.4	76.1	73.7	- 2.4
10	49.4	42.4	-7.0	50.6	57.6	7.0

<u>Attitude Item</u>	<u>% Correct</u>			<u>% Uncertain</u>			<u>% Incorrect</u>		
	Pre	Post	Change	Pre	Post	Change	Pre	Post	Change
1	72.9	76.1	3.2	4.7	3.9	-.8	22.4	20.0	-2.4
2	82.4	67.8	-14.6	2.0	2.4	.4	15.7	29.8	14.1
3	51.0	62.0	11.0	8.2	5.9	-2.3	40.8	32.2	-8.6
4	63.9	69.8	5.9	5.1	2.4	-2.7	31.0	27.8	-3.2
5	88.6	69.8	-18.8	3.1	2.4	-.7	8.2	9.8	1.6
6	66.7	64.3	- 2.4	9.8	5.1	-4.7	23.5	30.6	7.1
7	65.5	72.5	7.0	8.2	3.1	-5.1	26.3	24.3	-2.0
8	76.1	78.0	1.9	9.8	5.5	-4.3	14.1	16.5	2.4
9	70.2	77.6	7.4	12.5	8.6	-3.9	17.3	13.7	-3.6
10	65.1	74.1	9.0	14.1	11.4	-2.7	20.8	14.5	-6.3

APPENDIX IV

347

Appendix IV

A reliability study of the Facts and Attitude instruments used in the alcohol education week evaluation was conducted using sixth and seventh grade parochial school students (N=91) in Somerville. The design employed in this study was as follows:

1. Two groups (classrooms) of 6th grade students (45) and two groups (classrooms) of 7th grade students were administered the Facts and Attitude instruments by CASPAR program staff with the classroom teacher present in the classroom. The school had randomly assigned students to classrooms at the beginning of the school year so that the design employed was randomized to the extent that the school actually did what it said it did. Analysis of first test administration revealed no significance between-class-in-grade differences which would indicate that the school had indeed randomly assigned students to classes.
2. Seven days (7) later all 6th and 7th grade classes were again administered the Facts and Attitude test and then a short follow-up series of structured response questions about whether or not they had spoken to anyone and to whom during the seven-day interval.
3. All classrooms then answered a longer questionnaire on no-treatment contamination sources. A sixth and seventh grade classroom were also group interviewed on the same items.

Table I presents the test-retest reliability coefficients on percent correct scores for achievement and attitudes for 6th and 7th grade students. As can be seen from Table I, 6th grade students were far more variable on the achievement items than 7th graders with no

Table I: Reliability coefficients for Fact and Attitude items by grade

Grade	<u>n</u>	<u>r_{tt} Facts</u>	<u>r_{tt} Attitudes</u>
6th	45	.55	.74
7th	<u>46</u>	<u>.70</u>	<u>.74</u>
Average	91	.61	.74

differences occurring on the attitude items. Although the test-retest reliabilities reported are reasonably adequate for ten-item scales, the low stability of 6th graders on the fact scale, as well as the error variance itself, is in need of explanation. Further analysis of the collected questionnaires revealed the following findings:

1. Those students who reported talking to friends, parents, or teachers about the items on the test had significantly greater test to retest variation (absolute difference) scores than those students who did not ($p < .001$). Sixth graders reported more question asking than seventh graders and the absolute value of sixth grade variation scores were significantly greater than seventh grade score ($p < .01$).

2. Females asked more questions than males and had significantly greater variation scores than males.

3. Question-askers did not show a significant or consistent increase in achievement from the test to retest which indicates that they were given erroneous information or information that led them to the uncertain position.

4. Those students who reported that they spent time during the two-week interval actively thinking about the questions on the test made significant increased in Fact scale scores from the test to the retest. This finding seems to be related to Craig and Lockhart's depth of processing view of learning and behavior change. Only about 50% of these students reported talking to other people about the items on the test.

5. When the test-retest reliability coefficients were recomputed using what might be termed only valid no treatment Ss (no reported talking to others or depth processing) the reliability coefficients significantly increased. These coefficients are given in Table II.

Table II: Test-Retest Reliability Coefficients for valid no treatment subjects.

<u>Grade</u>	<u>n</u>	<u>r_{tt} Fact</u>	<u>r_{tt} Attitude</u>
6th	18	.81	.87
7th	29	.87	.90
	<u>47</u>	<u>.85</u>	<u>.89</u>

As can be seen from Table II, the stability coefficients for valid Ss are quite acceptable.

Conclusion

What can be concluded from the test-retest reliability study done would seem to be the following:

1. For the CASPAR Alcohol Education Fact and Attitude instrument, there seems to be a test effect on the Facts subscale; namely, simply testing is a treatment or a stimulus to seek treatment particularly with younger students. For most students, however, the testing effect is not a systematic effect; namely, scores do not systematically increase or decrease. This would imply that the external information gained is sometimes correct and sometimes incorrect in a random way. Although this means that scores on the instruments are to some degree unstable, it does not mean that they are biased from administration to administration; namely, increase just due to taking the instrument more than once.
2. For certain students, taking the instrument more than once does seem to systematically increase scores. This increase seems to be due to the depth to which the students think about the content of the instrument and perhaps to the answers he is given to inquiries. For such a student, the test is a stimulus to gain instruction even when no formal instruction is available.
3. The test-retest reliability coefficients of the instrument seem to increase with age (more information is needed on this point) and to increase when valid experimental conditions are obtained (no external sources of information flow). Overall, the reliability coefficients are adequate for effects estimation, but particularly so for students at the seventh grade or above level, given that the scales are only ten items. When spurious treatment sources are eliminated, the instrument gives scores that are quite stable. Since these spurious sources are ones that will most likely be operational in most situations, close findings of significance ($p=.10$ to $.05$) should be accepted with extreme caution as they may not be due to treatment but to extra-treatment factors. As the extra treatment sources seemed from this study to produce random increased or decreases in scores, use of the instrument and interpretations of its findings should not be fraught with difficulties about the $.01$ level.

APPENDIX V

351

Appendix V

Sources of Knowledge about

Table I : Sources of Knowledge about by Grade

<u>Sources</u>	<u>GRADE</u>			Significance
	7 (N=80) %	8 (N=90) %	9 (N=85) %	
School	10	38	48	<.001
Home	19	18	21	--
Friends	20	36	41	<.05
	10	17	18	--
Church	5	10	21	<.01
Other	13	9	18	--

As shown in table I , older students have heard more about than younger students in school, from friends, and in Church.

Table II: Sources of Knowledge About by Group

<u>Sources</u>	<u>GROUP</u>		Significance
	A (N=137) %	B (N=118) %	
School	36	29	--
Home	20	19	--
Friends	31	35	--
	13	17	--
Church	13	9	--
Other	15	11	--

As Table II shows, there were no reported significant differences between the groups on any of the sources.

Table III: Sources of Knowledge about by Sex

Sources	SEX		Significance
	M (N=107) %	F (N=148) %	
School	24	39	<.05
Home	18	20	--
Friends	35	31	--
	14	16	--
Church	21	12	--
Other	16	11	--

As shown in Table III, males heard more about in school than females.

The number of sources reported was analyzed by grade, by group and by sex. Older students reported hearing about from more sources than younger students (significance <.01). No significant differences were found for grade or group.

APPENDIX VI

Appendix VIA

Sources of Previous Alcohol Education

The pre-test presents information about sources of previous alcohol education and sources of knowledge about alcohol. Each of these are examined according to grade, group and sex. (For sex, the effect of the attrition rate must be kept in mind.)

Previous Alcohol Education Sources

Table I: Previous Alcohol Education by Source Reported

<u>Source</u>	<u>%</u>
School	75
Home	66
Friends	48
	9
Church	22
Other	21

As table I shows, school is the most frequently reported source followed by home and then friends. Twenty-one percent reported receiving alcohol education from other sources. The most frequently mentioned other source is media (TV, movies, newspapers, magazines, etc.).

Table II: Previous Alcohol Education Sources by Grade

<u>Sources</u>	<u>GRADE</u>			Significance
	7 (N=80) %	8 (N=90) %	9 (N=85) %	
School	85	77	64	<.01
Home	73	57	71	<.10
Friend	40	57	47	<.10
	9	6	12	
Church	18	16	33	<.05
Other	36	10	19	<.001

As is shown by Table II, in relation to previous alcohol education from school there is a linear relationship with more students from the lower grades reporting alcohol education from school than the higher grades. Fewer eighth graders report previous alcohol education from home while at the same time significantly more of them report previous alcohol education from friends. More ninth graders report alcohol education from church while more seventh graders report alcohol education from other sources.

Table III : Previous Alcohol Education Sources by Groups

<u>Sources</u>	<u>GROUPS</u>		Significance
	A (N=137) %	B (N=118) %	
School	78	72	--
Home	72	60	<.10
Friends	39	59	<.01
	7	11	--
Church or Synagogue	30	13	<.01
Other	20	23	--

Table IV : Previous Alcohol Education Sources by Sex

<u>Sources</u>	<u>SEX</u>		Significance
	M (N=107) %	F (N=148) %	
School	82	70	<.05
Home	67	66	--
Friends	45	51	--
	11	7	--
Church	21	23	--
Other	29	16	<.05

As is shown in Table IV above, more males reported receiving alcohol education from school and other sources.

The number of sources reported was analyzed by grade, by group and by sex. Males reported learning from more sources than females (significance <.10). No significant differences were found for grade or group

Appendix VIB: Alhome as a Design Factor

Of the six sources of previous alcohol education, only home as a source was found to have a significant correlation ($r=.17$) with the number of correct items on the fact subtest. For this reason, home was selected as a design factor.

However, a difficulty in using home as a factor is that it might be somewhat confounded with other sources. All students with alhome are not the same in their configurations of previous alcohol education experiences. Some learned from all sources, some just from home. As is similar for non alhome students. This heterogeneity must be kept in mind in interpreting the findings.

APPENDIX VII

Appendix VII: Social Desirability Scale

In 1975, Crandell developed a 48-item social desirability scale for school-aged students. The Crandell scale was found to have reasonably adequate test-retest reliability ($r=+.88$), internal consistency ($r=+.82$), and validity coefficients. In December of 1976, all 44 items of the Crandell scale were administered to 250 sixth and eighth grade students in a large suburban school system in eastern Massachusetts. This sample of students was found not to be significantly different from Crandell's norming populations. From the responses provided by these 256 students, to the Crandell scale, 12 items were selected which best predicted students' 48-item scale scores under the restriction that these 12 items also have high internal consistency. The 12 items selected predicted 48-item scale scores at $r=+.87$ and they had an internal consistency coefficient of $r=+.86$. The two sets of items, therefore, were called Short Form A and B of the Crandell scale and the reason they were developed was to diminish the amount of testing time needed in the data collection process. Short Form A was used in gathering data from _____ students and the items on this form seemed to reflect a tendency to give socially conformist or normatively stereotyped responses. The instrument was scored so that a high score reflected a strong tendency or set to give stereotype or conformist responses and a low score reflect a low tendency or set to give such responses.

Table I on the following page presents the results of a three-way analysis of variance of the SDS. There were no significant differences ($p<.10$) according to group or alhome though A group students and students without alcohol education at home tended to have higher scores than B group students and students with alcohol education at home respectively. However, seventh graders had significantly higher scores ($p<.05$) than eighth and ninth graders. This difference was due mostly to the significantly higher scores for the 7th grade A group.

Table I : Analysis of Variance of Social Desirability Scale (% total) grade by group by alhome.

N=255					
<u>GROUP x ALHOME</u>					
Grade	A(137)		B(118)		Totals $\bar{x}$
	No(39) $\bar{x}$	Yes(98) $\bar{x}$	No(47) $\bar{x}$	Yes(71) $\bar{x}$	
7(80)	40.91	36.56	28.03	24.38	31.88
8(90)	26.39	21.61	25.79	21.18	23.43
9(85)	<u>30.00</u>	<u>24.79</u>	<u>25.56</u>	<u>27.92</u>	26.28
Total:	31.41	27.64=28.67	26.24	24.30=25.08	

<u>Source of Variation</u>	<u>DF</u>	<u>Mean Square</u>	<u>F</u>	<u>Significance of F</u>
<u>Main Effects</u>				
Grade	2	24.64	4.26	0.015**
Group	1	14.39	2.49	0.112
Alhome	1	11.65	2.02	0.153
<u>2-Way Interactions</u>				
Grade x Group	2	15.65	2.71	0.067*
Grade x Alhome	2	0.82	0.14	0.999
Group x Alhome	1	1.30	0.23	0.999
<u>3-Way Interactions</u>				
Grade x Group x Alhome	2	1.07	0.19	0.999

APPENDIX VIII

361

Appendix VIIIA: Evaluation Design

A. Projected Design

1. The Science Department Head was to choose at each grade level (7, 8, 9th) two groups of students who represented the "worst" kids (B group). Therefore, there would be the following:

Grades	A Groups	B Groups	Totals
7th	2	2	4
8th	2	2	4
9th	2	2	4
Totals	6	6	12

2. On April 4th all groups were to be pre-tested with the pre-test (Cycle IV form except for prior exposure changes) and Social Desirability Scale (Form A). Six groups were to be administered the pre-test first and then the social desirability scale and the other six groups vice versa. Therefore, there would be the following:

Grades	A Groups		B Groups		Total
	Pre-SDS	SDS-Pre	Pre-SDS	SDS-Pre	
7th	(7A1)	(7A2)	(7B1)	(7B2)	4
8th	(8A1)	(8A2)	(8B1)	(8B2)	4
9th	(9A1)	(9A2)	(9B1)	(9B2)	4
	3	3 = 6	3	3 = 6	12

3. On April 11th, the last day of treatment, all 12 groups were to fill out three student feedback sheets (one each on the principle treatment modes experienced; i.e., skits, films, guest speakers).
4. On April 14th, all 12 groups were to be post-tested.

B. Actual Design

1. Concerning A and B groupings, four different groups at each grade level were tested on April 4th. However, concerning A and B group classifications, since the 8th grade was only semi-homogeneous and the 7th grade not all, the science department was asked to do the A and B groupings informally. During analysis of the data, questions arose about the validity of some of the classifications and though these questions were resolved, the informality and subjectivity of these classifications must be kept in mind in doing the interpretations.
2. Concerning the pre-test and SDS administrations, because of communication problems, many of the science teachers did not follow their directions of administering Pre prior to SDS or vice versa. Consequently, the study to determine the influence of the SDS on to the Pre was abandoned. Also, a substitute teacher administered both Pre and Post tests in the same session (9B2) without administering the SDS.
3. The three SFS sheets were combined into one three-part sheet and administered to all students on April 7th at the end of the rap sessions. Because of seating problems, the 12 groups did not remain identifiable units and therefore became intermingled with the total population. It was determined that it would be too time consuming to try to rebuild the groups according to code names. Thus the systematic analysis of the SFS sheets was abandoned.
4. Concerning the post-testing, only 7 groups were administered the test on April 14th. Two groups (8th grade, B groups were administered the test on the 13th, one group (7th grade, B group) on the 15th, and two groups on the 27th (7B and 9B). Also, for 9B2, the SDS was administered on the 14th before the Post.

The following table summarizes the actual design followed:

Grade-Group	Period	SDS	PRE	SFS	PST	Date: April
7A1	2	4	4	7	14	
7A2	5	4	4	7	14	
7B1	5	4	4	7	27**	
7B2	5	4	4	7	15*	
8A1	5	4	4	7	14	
8A2	5	4	4	7	14	
8B1	5	4	4	7	13*	
8B2	2	4	4	7	13*	
9A1	7	4	4	7	14	
9A2	4	4	4	7	14	
9B1	6	4	4	7	27**	
9B2	7	14*	4**	7	14	

Appendix VIIIB: The Questionable Permanence of Treatment Effect

Some indication was discovered that the treatment effect was only transitory. As noted previously, two groups (7B2, 9B1) were administered the post-test two weeks after the end of treatment. When these were compared with their grade/group counterparts, they showed a smaller gain in factual information (see Table I). The attitude effect was in the same direction, though not significant, perhaps because of the generally small changes discovered in this area.

In particular, the ninth grade group showed a movement from uncertain to incorrect on factual items, the opposite of the direction taken by their counterpart who were measured immediately following treatment. There was also a sizable decrease in the variance of post-test negative scores on fact items showing a negative trend of greater uniformity than their "on-time" peers. Conversely, delayed attitude scores show significantly greater variance than the on-time group. (See Table II)

It is tempting to conclude from this evidence that the treatment is contraindicated for older and/or B group students. Such students would show small immediate gains, but would in the long term be negatively affected. Yet careful inspection of the seventh grade case fails to substantiate this conclusion. The differences between delayed and "on-time" groups lie in the same direction as in the ninth grade, although they are not significant. (See Table III). On the pre-test, however, the delayed group started significantly higher, and any differences in gains can easily be explained as regression effects, and are well short of the confidence interval required by the instruments' limited reliability.

The ninth grade loss, however, raises some serious questions about differential decay patterns, and the impermanence of change in this area. These can only be answered by further experimentation, specifically designed for this purpose, and with controls for more variables than were possible in this study.

Appendix VIIIB

Table I : Gain Scores" "On-time" vs. delayed post-tests: seventh and ninth grades (Group 1 = on-time; Group 2 = delayed)

			<u>Mean</u>	<u>Standard deviation</u>	<u>t*</u>	<u>One-tailed probability</u>
FACTS:	% Correct	1.	17.97	17.10	1.77	.041
		2.	9.97	21.17		
	% Uncertain	1.	-14.86	18.69	-0.03	.490
		2.	-14.74	21.02		
	% Wrong	1.	3.14	18.27	-1.96	.027
		2.	4.74	16.06		
ATTITUDE:	% Correct	1.	6.74	16.78	1.11	.135
		2.	1.53	22.66		
	% Uncertain	1.	-1.71	9.54	0.25	.401
		2.	-2.37	12.40		
	% Wrong	1.	-5.14	14.83	-1.53	.065
		2.	0.79	18.07		

*With 33 degrees of freedom

Table II: Gains Scores: "On-time" vs. delayed post-tests:
Ninth grade (Group 1 = on time; Group 2 = delayed)

			<u>Mean</u>	<u>Standard deviation</u>	<u>t*</u>	<u>One-tailed probability</u>
FACTS:	% Correct	1.	8.67	16.85	0.89	.019
		2.	2.95	19.98		
	% Uncertain	1.	0.67	11.63	2.36	.012
		2.	-11.50	17.25		
	% Wrong	1.	-9.33	21.20	2.87	.003
		2.	8.50	15.65		
ATTITUDE:	% Positive	1.	4.00	15.95	0.50	.350
		2.	0.45	23.88		
	% Uncertain	1.	2.67	11.63	1.42	.082
		2.	-3.00	11.74		
	% Negative	1.	-6.67	11.75	1.46	.076
		2.	2.50	21.97		

*With 33 degrees of freedom

Table III: Gain Scores: "On-time" vs. delayed post-tests:
seventh grade (Group 1 = on time; Group 2 = delayed)

			<u>Mean</u>	<u>Standard deviation</u>	<u>t*</u>	<u>One-tailed probability</u>
FACTS:	% Correct	1.	24.95	13.94	1.29	.103
		2.	17.78	20.16		
	% Uncertain	1.	-26.50	13.87	1.28	.104
		2.	-18.33	24.55		
	% Wrong	1.	1.50	14.61	0.19	.425
		2.	0.56	15.89		
ATTITUDE:	% Positive	1.	8.80	17.49	0.95	.174
		2.	2.72	21.84		
	% Uncertain	1.	-5.00	6.07	1.01	.160
		2.	-1.67	13.39		
	% Negative	1.	-4.00	16.98	0.59	.280
		2.	-1.11	12.78		

*With 36 degrees of freedom

Appendix IX: Attrition Rate

Table I: Attrition rate by grade, by group, by sex.

	GROUP					
	A			B		TOTAL
	M %	F %		M %	F %	
7	14	8		21	4	11
8	10	13		21	10	13
9	4	3		17	16	10
TOTAL	9	8		20	9	12

As shown in Table I, some cells lost more than a fifth of the group pre-tested. More males were lost than females (14 to 9 percent) and more B group students were lost than A group students (15 to 9 percent). Eighth graders had the highest loss (13 percent to 11 and 10 for 7th and 9th graders respectively). However, the most disproportionate loss was among B group males. They lost 20 percent which is more than twice any other group.

Table II: Pre-Achievement (% correct) $\bar{x}$ score differences due to attrition rate by grade by group by sex.

Grade	Group	SEX	
		Male	Female
7	A	-0.3	1.3
	B	-4.6	-1.3
8	A	-1.1	-0.4
	B	-1.8	0.0
9	A	0.0	1.6
	B	-4.3	-0.1
	TOTAL:	-12.1	1.1

The Pre-Achievement (% correct) $\bar{x}$ scores for males lost 12.1 percentage points from the unmatched to the matched groups while females gained 1.1 percentage points. Though for the unmatched group there was no significant difference for sex ($p .999$). The loss of higher male scores cause a sex effect in the matched group ($p .10$). Because of this discrepancy, sex as a design factor was abandoned. There was also a large B group loss which however, increased the group effect already found in the unmatched group.

APPENDIX III

Teacher's Manual:
Evaluation Guidelines

Teacher Manual: Curriculum Evaluation

There are seven major components to the teacher manual:

- I. Evaluation Schedule
- II. General Instructions
- III. CASPAR Code Name Instructions
- IV. Social Desirability Scale (SDS) Instructions
- V. Pre-Post Tests (PAP) Instructions
- VI. Student Feedback Sheet (SFS) Instructions
- VII. Teacher Process Log (TPL) Instructions

I. The Evaluation Schedule is at the end of the manual. The Evaluation Schedule specifies what is to be done at which session(s) for which group(s). Please examine the schedule closely. The success of the evaluation is dependent upon a close adherence to the schedule.

II. General Instructions

For each session selected according to the Evaluation Schedule, you will receive a pre-coded manila envelope. Each manila envelope will have your name, the group code, the curriculum section #. It will also state what is to be evaluated for that session and will specify and contain the necessary materials to do the evaluation.

Important Steps:

1. Examine your Evaluation Schedule and your coded envelopes to see if they correspond. If they don't, please contact us.
2. Examine each manila envelope to make sure you have the necessary material for each session. If you don't, please contact us.
3. Before each session, examine your Evaluation Schedule, and/or manila envelope to insure that you perform the necessary evaluation for that session.
4. After each selected session, place the material for that session back into its appropriate envelope and return it to CASPAR.
5. Make sure you have the poster and that it is available for when you need it.

The poster presents rules for filling in the CASPAR Code Name, which will be needed to help students code their written material such as the Dear Abby letter.

6. For each class section in which you do alcohol education you need to provide the following material:

- a. In a pre-test envelope: Classlist identifying the grade, period, subject and group code (A or B) if there is any.
- b. In post-test envelope: Attendance record for the AE sessions and list of curriculum section #'s covered in their order of presentation.

III. Instructions for CASPAR Code Name

The rules for generating the CASPAR Code Name are on the Social Desirability Scale, the Pre and Post Tests, and the Student Feedback Sheet.

For those sessions selected according to the Evaluation Schedule in which there is written material, students are to fill in their code names at the top of their papers, e.g., Dear Abby letters. To help the students fill in their code names, the poster should be placed where it can be seen by all the students.

First-Use Instructions

1. For other than Senior High Students, read the instructions for the code name aloud and mention in passing that male means boy and female means girl. We have found that some students do not know the meaning of the words "male" and "female".
2. Ask the students to fill in the appropriate letters.
3. Ask them if they have any questions or are having any problems. Be certain that everyone knows how to follow the rules.
4. After the first use of the CASPAR Code Name, students should have no problems filling it in.

IV. Social Desirability Scale Instructions

The Social Desirability Scale is to be administered to both groups (A and B). The scale should be handed out and picked up before the Pre-test is administered. The scale is made up of 12 true-false items and should take about ten to fifteen minutes.

Administration Instructions

1. Ask the students to fill in the date and their code names. It is helpful to provide the students with the date since many fill it in wrong.
2. Read the instructions. Point out to the students that the sentences are statements about what they do or how they feel.

3. Answer any questions as best as you can. Since the sentences were originally constructed for elementary school students, some older students might not take the statements seriously. Ask those students to respond to the statements as best as they can and keep track of how many they are.
4. Since some students do not live with their parents, they might have trouble with question #10. Ask those students to substitute any older adult they live with such as aunt or uncle.

V. Pre-Post Test Instructions

The Pre-Post Tests are to be administered according to the Evaluation Schedule.

Ask students to fill in the date, the period, and their CASPAR Code Name. Provide the date and period since many students fill it in wrong. For other than Senior High students, read the instructions aloud. Please do not go over any questions after the Pre-test. This will distort their observed Pre to Post changes.

VI. Instructions for Administering Student Feedback Sheet

The Student Feedback Sheet is to be administered at the end of each session selected according to the Evaluation Schedule.

The Student Feedback Sheet has five parts: The date, the CASPAR Code Name, the feedback scale, the item on questioning and the comments or questions section. Students should be given the date. Students should know how to fill in the CASPAR Code Name (If not read section on CASPAR Code Name).

Scale Instructions

For the first administration, reserve five to ten minutes for the end of the session. A few minutes will be needed to explain how the scale should be filled in. After ~~this first~~ administration, filling in the sheet should only demand a minute or two.

1. Write on the board the following:

important not important 1 2 3

2. After giving the students the date and time to fill in the CASPAR Code Name, read the instructions to the feedback scale aloud.

3. Circle one of the words (or phrases) on the board and one of the numbers and read to the students out loud how your choice would complete the sentence, i.e., if you circled the word "important" and the number "1" you would say: "For me, today's session was a little important."
4. Ask if there are any problems or questions. If there are, do another example.
5. Be certain that everyone knows what the words mean and how to use the scale before asking them to fill it in.
6. After the first administration, it is only necessary to give them the date and time to fill in the code name and scale and then place the returned sheets in their appropriate envelope.

VII. Instructions for Teacher Process Log

The Teacher Process Log is to be filled in as soon as possible after each session selected according to the Evaluation Schedule. After the log has been filled in, it is to be placed in its appropriate envelope. Please do not read the student feedback sheets before filling in your log. It will bias your responses.

Clarification of Identification Terms

1. "Session #" refers to the ordinal position of each Alcohol Education class, i.e., 1=1st, 2=2nd, etc.
2. "Date" refers to the date of the class and not for filling in the log.
3. "Curriculum Section #" refers to the identification number (e.g. "10 II") found at the top of each curriculum page.
4. "Group" refers to either best (A) or worst (B) class. (See Evaluation Schedule)

Filling-in Lesson Description.

This section asks you to separate the session into major parts according to changes in content or method and to state what content or method and to state what content was covered, what method was used (Large or Small group discussion, lecture, demonstration, brainstorming, game, role playing, writing, etc.), how long it took, and whether or not a peer leader was involved (check). Please try to be as precise as possible. For example, if you used a variation at the bottom of the curriculum sheet describe that as a major part of the session. Or if you reviewed or finished up the previous session describe that as a major part of the session.

Filling in the Session Rating: Use a slash (/)

Filling in Exceptions to Ideal Classroom Conditions

Check (✓) those conditions that make the session different from what you would consider as an ideal learning session.

Filling in Process Ratings

Circle the number of times you observed each one of the dimensions. The word "probe" is used in a specific sense and is defined for you below:

A Probe: is a teacher response which requires a pupil who just responded to in some way go beyond that first response-- to Clarify it, to Justify it, to further Explain it, Relate it to another idea, etc.

Types of Probes:

- (1) CLARIFICATION: the teacher asks the pupil for more information or for more meaning.
- (2) CRITICAL AWARENESS: the teacher asks the pupil to justify his answer, to reflect on it.
- (3) REFOCUS: the teacher asks the pupil to relate his answer to another idea or concept.
- (4) PROMPTING: the teacher provides the pupil with a hint, or rephrases a question to help the pupil respond.
- (5) REDIRECT: the teacher changes the direction of the interaction to include more than one pupil's
• response on the question under consideration.

It would probably be best to fill this section in immediately after class so that you can get as accurate a rating of these dimensions as possible.

Filling in the Critical Features Section

Each student who falls into one of the critical feature categories is to be given a code name and his name is to be placed on the line next to the observed feature. Any method may be used to generate the student's code name. However, the code name must meet these requirements:

1. It should be no more than seven letters. There is only so much space to fill in the names.
2. Each student must have a unique code name. It might be helpful to keep a master list of student names and their codes so they are not forgotten or duplicated.
3. All codes should end in an M (for Male) or an F (for Female).
4. The code names do not have to be pronounceable or aesthetically pleasing.

5. The code names should be very difficult to crack, i.e., others including students should not be able to figure out someone's identity from the codes. For example, if you use first initials, someone might try to figure out names according to the classlists.

Possible Rules for Generating a Code Name

1. First letter of the person's general height
e.g. T-tall, S-short, A-average
2. First letter of the person's general weight e.g.
F-Fat, T-thin, A-average
3. First letter of the person's hair color or eye color
4. Last letter of the person's first name or middle name
or name or last name or all of them.

If you use rules it might be helpful to write them down for later use of reference.

Filling Postscript: Use check (✓)

Evaluation Schedule

1. Social Desirability Scale to be given to both groups (A and B)
2. Pre and post-tests to be given to both groups (A and B)
3. Teacher Process Log to be filled in for all Alcohol Education sessions for both groups (A and B)
4. Student Feedback Sheets to be administered for six sessions.
 - a. If you are doing the 7th grade curriculum, student feedback sheets are to be administered for sections 7II, 7IIb, 7IVa, 7VIII, 7IX, and 7Xa and b.
 - b. If you are doing the 12th grade curriculum student feedback sheets are to be administered for sections 12IIc, 12VIa, 12VIIa, and 12VIIIb. You can administer the two other sets to any other sections that you choose.

Summary

- I. Your Curriculum evaluation package should include the following:
 1. The Teacher's Manual
 2. Two labelled manila envelopes (A and B groups) containing Pre-tests and social desirability scales.
 3. Two labelled manila envelopes (A and B groups) containing post-tests.

4. Twelve labelled manila envelopes (2 times each group) containing Teacher Process Logs and Student Feedback Sheets.
5. Two remaining labelled manila envelopes containing five Teacher Process Logs.
6. A poster for written materials.

II. Materials to be included in manila envelopes:

1. Teacher Process Log
2. If specified, student feedback sheet
3. If specified, coded written materials
4. In the Pre, class lists for all classes with your name, group identification (A or B) class, period, grade level; and in the Post, the order in which curriculum section #'s were covered, and attendance list.

APPENDIX IV:

Anova Results and Cell Means
by, Grade, Group, and Level of Prior Primary Exposure:
Pre-Test and Post-Test

Anova Results for Percent Correct Scores on the
Pretest by Grade, Group, and Level of Primary
Prior Exposure (LPPE)

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Grade(GD)	3	8629.42	28.86	0.001
Group(GP)	1	217.47	0.73	0.999
LPPE	1	41292.54	138.11	0.001
GD x GP	3	383.82	1.28	0.278
GD x LPPE	3	15.57	0.05	0.999
GP x LPPE	1	210.77	0.70	0.999
GD x GP x LPPE	3	51.12	0.17	0.999
ERROR	610	298.98		

	<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GRADE: 7	206	49.82	50.10	
8	180	59.79	59.48	
10	144	46.23	45.97	
12	96	62.80	63.16	
				0.32
GROUP: A	345	54.09	53.31	
B	281	53.55	54.51	
				0.01
LPPE: Low	450	48.79	48.74	
High	176	66.79	66.91	
				0.40
Mult. R. .517				

Percent Correct Knowledge Scores on the Pretest
by Grade, Group and Level of Primary Prior
Exposure (LPPE)

<u>Group A</u>						
LPPE:	Low			High		
GRADE	n	$\bar{x}$	s	n	$\bar{x}$	s
7	71	44.85	15.68	31	63.39	20.38
8	68	52.04	15.67	37	70.97	15.90
10	58	40.02	17.93	28	58.93	17.77
12	37	58.46	20.32	15	80.87	18.91

<u>Group B</u>						
LPPE:	Low			High		
GRADE	n	$\bar{x}$	s	n	$\bar{x}$	s
7	81	45.51	13.72	23	62.04	14.10
8	58	57.66	18.26	17	73.65	20.63
10	43	41.44	18.10	15	60.20	14.52
12	34	56.88	21.71	10	71.80	18.13

Anova Results for Percent Uncertain Knowledge
Scores on the Pretest by Grade, Group, and Level
of Prior Primary Exposure (LPPE)

Source	df	ms	F	p
Group(Gp)	1	485.02	2.29	0.126
Grade(GD)	1	935.51	4.42	0.005
LPPE	3	6899.44	32.59	0.001
GD x GP	3	213.05	6.00	0.390
Gp x LPPE	1	33.50	0.15	0.999
GD x LPPE	3	71.22	0.33	0.999
GD x GP x LPPE	3	80.44	0.38	0.999

ERROR

	n	UNADJUSTED MEAN	ADJUSTED MEAN	ETA
GRADE: 7	206	17.41	17.37	
8	180	12.89	12.98	
10	144	14.28	14.33	
12	96	11.93	11.79	
				0.14
GROUP: A	345	14.93	15.35	
B	281	14.08	13.57	
				0.03
LPPE: Low	450	16.61	16.64	
High	176	9.29	9.21	
				0.22
Mult. R.	0.266			

Percent Uncertain Knowledge Scores on the
Pretest by Grade, Group, and Level of
Primary Prior Exposure (LPPE)

Group A						
LPPE:	Low			High		
GRADE	n	$\bar{x}$	s	n	$\bar{x}$	s
7	71	20.56	17.21	31	12.26	13.02
8	68	17.62	14.77	37	8.35	12.08
10	58	16.50	13.86	28	9.82	13.83
12	37	12.70	14.30	15	6.87	12.41

Group B						
LPPE:	Low			High		
GRADE	n	$\bar{x}$	s	n	$\bar{x}$	s
7	81	18.90	15.20	23	9.35	12.85
8	58	12.30	14.82	17	6.82	9.49
10	43	15.09	16.11	15	11.73	11.36
12	34	15.03	15.15	10	6.10	12.69

Anova Results for Percent Incorrect Knowledge
Scores on the Pretest by Grade, Group, and
Level of Prior Exposure (LPPE)

Source	df	ms	F	P
Group (GP)	1	52.95	0.22	0.999
Grade (GD)	3	5572.91	24.01	0.001
LPPE	1	14434.21	62.20	0.001
GD x GP	3	81.06	0.34	0.999
GP x LPPE	1	76.20	0.32	0.999
GD x LPPE	3	134.93	0.58	0.999
GD x GP x LPPE	1	203.36	0.87	0.999

ERROR

	n	UNADJUSTED MEAN	ADJUSTED MEAN	ETA
GRADE: 7	206	32.77	32.54	
8	180	27.32	27.54	
10	144	39.49	39.70	
12	96	25.28	25.05	
GROUP: A	345	30.97	31.34	0.31
B	281	32.37	31.92	
LPPE: Low	450	34.60	34.62	0.04
High	176	23.92	23.88	
Mult. R.	0.423			0.29

Percent Incorrect Knowledge Scores on the Pretest
by Grade, Group, and Level of Primary Prior
Exposure (LPPE)

<u>Group A</u>						
LPPE:	Low			High		
GRADE	n	$\bar{x}$	s	n	$\bar{x}$	s
7	71	34.59	15.27	31	24.36	16.17
8	68	30.34	13.58	37	20.68	11.58
10	58	43.48	18.02	28	31.25	14.55
12	37	28.84	18.31	34	28.09	16.84

<u>Group B</u>						
LPPE:	Low			High		
GRADE	n	$\bar{x}$	s	n	$\bar{x}$	s
7	81	35.59	13.97	23	28.61	13.56
8	58	30.31	15.80	17	19.53	14.87
10	43	43.47	15.67	15	28.07	14.46
12	34	28.09	16.84	10	22.10	17.32

ANOVA RESULTS FOR
Percent Positive Attitude Scores on the Pretest
By Grade, Group and Level of Primary Prior
Exposure (LPPE) (Somerville only)

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Grade(GD)	3	6047.38	23.56	0.001
Group(GP)	1	1168.23	4.55	0.031
LPPE	1	7520.62	29.30	0.001
GD x GP	3	466.30	1.81	0.141
GD x LPPE	3	241.90	0.94	0.999
GP x LPPE	1	365.86	1.42	0.231
GD x GP x LPPE	3	326.02	1.27	0.283
ERROR	610	256.64		

	<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GRADE: 7	206	60.60	60.90	
8	180	70.48	70.24	
10	144	67.51	67.01	
12	96	76.35	76.53	0.32
GROUP: A	345	69.18	68.63	
B	281	65.19	65.86	0.11
LPPE: Low	450	65.09	65.21	
High	176	73.27	72.96	0.21

Mult. R. 0.387

Cell Means for Percent Positive Attitude Scores
on the Pretest by Grade, Group and Level of
Primary Prior Exposure (LPPE) (Somerville only)

<u>Group A</u>						
LPPE:	Low			High		
GRADE	n	$\bar{x}$	s	n	$\bar{x}$	s
7	71	60.56	15.61	31	67.39	13.96
8	68	69.28	16.14	37	76.24	15.69
10	58	65.66	18.26	28	79.93	14.49
12	37	72.05	17.65	15	82.27	12.19

<u>Group B</u>						
LPPE:	Low			High		
GRADE	n	$\bar{x}$	s	n	$\bar{x}$	s
7	81	57.01	14.73	23	64.17	13.30
8	58	66.93	16.42	17	74.82	16.18
10	43	60.88	18.65	15	68.20	13.91
12	34	79.00	14.73	10	74.30	21.38

ANOVA RESULTS FOR
Percent Uncertain Attitude Scores on the Pretest
by Grade, Group and Level of Primary Prior
Exposure (LPPE) (Somerville only)

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Grade(GD)	3	1293.41	8.80	0.001
Group(GP)	1	631.62	4.30	0.036
LPPE	1	2484.32	16.91	0.001
GD xGP	3	57.67	0.39	0.999
GD x LPPE	3	82.33	0.56	0.999
GP x LPPE	1	80.00	0.54	0.999
GD x GP x LPPE	3	220.79	1.50	0.211
ERROR	610	146.84		

	<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GRADE: 7	206	12.47	12.50	
8	180	7.71	7.73	
10	144	8.09	8.80	
12	96	5.90	5.83	
				0.20
GROUP: A	345	9.68	10.00	
B	281	8.37	7.97	
				0.05
LPPE: Low	450	10.31	10.34	
High	176	5.97	5.89	
				0.16

Mult. R. 0.262

Cell Means for Percent Uncertain Attitude Scores on the
Pretest By Grade, Group and Level of Primary Prior
Exposure (LPPE) (Somerville only)

<u>Group A</u>						
LPPE:	Low			High		
GRADE	n	$\bar{x}$	s	n	$\bar{x}$	s
7	71	14.41	15.77	31	10.61	11.23
8	68	10.25	13.04	37	6.51	9.02
10	58	10.24	15.26	28	3.54	6.73
12	37	9.05	13.25	15	3.70	13.69

<u>Group B</u>						
LPPE:	Low			High		
GRADE	n	$\bar{x}$	s	n	$\bar{x}$	s
7	81	13.61	14.42	23	5.04	8.21
8	68	10.25	13.04	37	6.51	9.02
10	43	8.70	11.65	15	6.60	8.11
12	34	4.74	7.09	10	5.00	10.80

ANOVA RESULTS FOR
Percent Negative Attitude Scores on the Pretest
by Grade, Group, and Level of Primary Prior
Exposure (LPPE) (Somerville only)

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Grade(GD)	3	1797.14	8.38	0.001
Group(GP)	1	3449.27	16.08	0.001
LPPE	1	1419.80	6.62	0.010
GD x GP	3	308.31	1.43	0.229
GD x LPPE	3	268.53	1.25	0.289
GP x LPPE	1	95.58	0.44	0.999
GD x GP x LPPE	3	161.61	0.75	0.999
ERROR	610	214.40		

	<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GRADE: 7	206	26.38	26.05	
8	180	21.44	21.66	
10	144	23.68	23.96	
12	96	17.50	17.39	
				0.20
GROUP: A	345	20.62	20.84	
B	281	25.88	25.60	
				0.17
LPPE: Low	450	24.08	23.93	
High	176	20.16	20.56	
				0.12
Mult. R.	0.277			

Cell Means for Percent Negative Attitude Scores
on the Pretest by Grade, Group, and Level of
Primary Prior Exposure (LPPE) (Somerville only)

<u>Group A</u>						
LPPE:	Low			High		
GRADE	n	$\bar{x}$	s	n	$\bar{x}$	s
7	71	24.47	14.14	31	21.42	12.81
8	68	20.24	13.49	37	14.15	11.16
10	58	23.14	14.81	28	15.71	13.53
12	37	18.65	17.53	15	16.00	12.10

<u>Group B</u>						
LPPE:	Low			High		
GRADE	n	$\bar{x}$	s	n	$\bar{x}$	s
7	81	28.89	12.40	23	30.13	14.50
8	58	26.53	17.48	17	18.94	17.94
10	43	29.42	16.93	15	24.20	13.28
12	34	16.06	12.53	10	20.40	18.15

ANOVA RESULTS FOR
Percent Correct Knowledge Scores on the Post Test
by Grade, Group, and Level of Prior Primary
Exposure (LPPE) (Somerville only)

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Grade(GD)	3	4323.02	13.52	0.001
Group(GP)	1	1129.33	3.53	0.057
LPPE	1	6566.87	20.55	0.001
GD x GP	3	78.61	0.24	0.999
GD x LPPE	3	526.54	1.64	0.175
GP x LPPE	1	5.11	0.01	0.999
GD x GP x LPPE	3	78.68	0.24	0.999
ERROR	610	319.55		

	<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GRADE: 7	206	73.99	74.27	
8	180	77.87	77.65	
10	144	66.50	66.25	
12	96	78.29	78.47	0.24
GROUP: A	345	75.45	75.26	
B	281	72.31	72.54	0.08
LPPE: Low	450	71.96	72.00	
High	176	79.37	79.25	0.18

Net. R. 0.310

Cell Means for Percent Correct Knowledge Scores
on the Post Test by Grade, Group, and Level of
Prior Primary Exposure (LPPE) (Somerville only)

<u>Group A</u>						
LPPE:	Low			High		
GRADE	n	$\bar{x}$	s	n	$\bar{x}$	s
7	71	75.01	17.79	31	79.29	16.78
8	68	75.04	17.48	37	86.27	13.47
10	58	65.44	20.05	28	72.00	17.24
12	37	77.86	20.74	15	83.86	18.09

<u>Group B</u>						
LPPE:	Low			High		
GRADE	n	$\bar{x}$	s	n	$\bar{x}$	s
7	81	70.82	18.92	23	74.78	14.68
8	58	73.03	19.05	17	87.41	9.87
10	43	62.72	20.10	15	71.13	11.66
12	34	76.61	17.23	10	77.20	14.70

ANOVA RESULTS FOR
Percent Uncertain Knowledge Scores on the Post Test
by Grade, Group, and Level of Prior Primary
Exposure (Somerville only)

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Grade(GD)	3	217.09	1.51	0.209
Group(GP)	1	417.51	2.90	0.085
LPPE	1	1567.10	10.91	0.001
GD x GP	3	71.28	0.49	0.999
GD x LPPE	3	139.93	0.97	0.999
GP x LPPE	1	102.29	0.71	0.999
GD x GP x LPPE	3	10.01	0.07	0.999

ERROR

----- 610 ----- 143.52 -----

	<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GRADE: 7	206	7.69	7.53	
8	180	6.19	6.31	
10	144	7.18	7.32	
12	96	4.68	4.59	0.09
GROUP: A	345	5.78	5.94	
B	281	7.79	7.59	0.08
LPPE: Low	450	7.72	7.68	
High	176	4.01	4.14	0.14

Mult. R.

0.176

Cell Means for Percent Uncertain Knowledge Scores
on the Post Test by Grade, Group, and Level of
Prior Primary Exposure (Somerville only)

<u>Group A</u>						
LPPE:	Low			High		
GRADE	n	$\bar{x}$	s	n	$\bar{x}$	s
7	71	6.07	10.89	31	5.90	12.13
8	68	6.93	12.60	37	2.76	6.90
10	58	8.16	13.44	28	3.14	7.25
12	37	5.27	13.74	15	3.33	6.17

<u>Group B</u>						
LPPE:	Low			High		
GRADE	n	$\bar{x}$	s	n	$\bar{x}$	s
7	81	10.04	13.72	23	6.83	12.96
8	58	8.45	14.01	17	3.06	7.00
10	43	9.98	14.96	15	2.93	5.04
12	34	5.12	8.77	10	3.00	6.75

ANOVA RESULTS FOR
Percent Incorrect Knowledge Scores on the
Post Test by Grade, Group, and Level of
Primary Prior Exposure (Somerville only)

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>P</u>
Grade(GD)	3	3337.97	17.21	0.001
Group(GP)	1	173.52	0.89	0.999
LPPE	1	1718.05	8.86	0.003
GD x GP	3	42.43	0.21	0.999
GD x LPPE	3	283.87	1.46	0.222
GP x LPPE	1	61.64	0.31	0.999
GD x GP x LPPE	3	73.86	0.38	0.999
ERROR	610	193.85		

	<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GRADE: 7	206	18.33	18.20	
8	180	15.94	16.04	
10	144	26.32	26.44	
12	96	17.03	16.95	0.27
GROUP: A	345	18.78	18.80	
B	281	19.90	19.87	0.04
LPPE: Low	450	20.32	20.32	
High	176	16.62	16.62	0.11

Mult. R. 0.300

Cell Means for Percent Incorrect Knowledge Scores
on the Post Test by Grade, Group, and Level of
Primary Prior Exposure (Somerville only)

<u>Group A</u>						
LPPE:	Low			High		
GRADE	n	$\bar{x}$	s	n	$\bar{x}$	s
7	71	18.92	16.09	31	14.81	15.03
8	68	18.03	11.49	37	10.97	11.77
10	58	26.40	16.54	28	24.86	15.75
12	37	16.87	13.04	15	12.80	15.43

<u>Group B</u>						
LPPE:	Low			High		
GRADE	n	$\bar{x}$	s	n	$\bar{x}$	s
7	81	19.14	12.95	23	18.39	14.16
8	58	18.52	12.53	17	9.53	7.67
10	43	27.30	16.73	15	25.93	10.57
12	34	18.27	13.08	10	19.80	11.17

ANOVA RESULTS FOR
Percent Positive Attitude Scores on the Post Test
by Grade, Group, and Level of Primary Prior
Exposure (LPPE) (Somerville only)

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Grade(GD)	3	631.84	2.05	0.104
Group(GP)	1	1596.99	5.18	0.22
LPPE	1	2484.87	8.07	0.005
GD x GP	3	1662.75	5.40	0.001
GD x LPPE	3	326.16	1.06	0.366
GP x LPPE	1	158.05	0.51	0.999
GD x GP x LPPE	3	524.58	1.70	0.163
ERROR	610	307.81		

	<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GRADE: 7	206	72.57	72.84	
8	180	75.64	75.45	
10	144	76.78	76.56	
12	96	77.31	77.43	0.11
GROUP: A	345	76.89	76.60	
B	281	73.02	73.37	0.11
LPPE: Low	450	73.78	73.90	
High	176	78.66	78.35	0.12

Mult. R. 0.183

Cell Means for Percent Positive Attitude Scores on the
Post Test by Grade, Group, and Level of Primary Prior
Exposure (LPPE) (Somerville only)

<u>Group A</u>						
LPPE:		Low		High		
GRADE	n	$\bar{x}$	s	n	$\bar{x}$	s
7	71	78.63	15.88	31	76.87	15.97
8	68	71.29	19.45	37	81.41	15.32
10	58	75.41	17.02	28	82.79	16.02
12	37	74.97	21.33	15	82.33	16.67

<u>Group B</u>						
LPPE:		Low		High		
GRADE	n	$\bar{x}$	s	n	$\bar{x}$	s
7	81	65.89	20.74	23	71.61	11.80
8	58	75.38	14.87	17	81.41	19.25
10	43	75.37	20.70	15	74.93	15.34
12	34	78.56	11.41	10	74.20	19.40

ANOVA RESULTS FOR
Percent Uncertain Attitude Scores on the Post Test
by Grade, Group, and Level of Primary Prior
Exposure (LPPE) (Somerville only)

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Grade (GD)	3	448.43	3.45	0.016
Group (GP)	1	10.64	0.08	0.999
LPPE	1	368.64	2.83	0.089
GD x GP	3	8.95	0.06	0.999
GD x LPPE	3	23.92	0.18	0.999
GP x LPPE	1	0.42	0.00	0.999
GD x GP x LPPE	3	240.07	1.84	0.135
ERROR	610	129.92		

	<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GRADE: 7	206	9.03	8.99	
8	180	6.65	6.69	
10	144	5.42	5.46	
12	96	5.66	5.62	0.13
GROUP: A	345	6.71	6.88	
B	281	7.35	7.15	0.03
LPPE: Low	450	7.51	7.48	
High	176	5.69	5.77	0.07

Mult. R.

Cell Means for Percent Uncertain Attitude Scores on
the Post Test by Grade, Group, and Level of Primary
Prior Exposure (LPPE) (Somerville only)

<u>Group A</u>						
LPPE:	Low			High		
GRADE	n	$\bar{x}$	s	n	$\bar{x}$	s
7	71	8.61	13.19	51	8.71	11.06
8	68	7.19	11.52	37	5.54	10.02
10	58	6.45	9.22	22	2.36	7.55
12	37	6.30	11.95	15	4.67	9.90

<u>Group B</u>						
LPPE:	Low			High		
GRADE	n	$\bar{x}$	s	n	$\bar{x}$	s
7	81	10.65	15.14	23	5.13	10.26
8	58	7.28	10.00	17	4.82	10.86
10	43	5.12	10.83	15	8.07	10.57
12	34	5.03	7.51	10	7.00	12.52

ANOVA RESULTS FOR
Percent Negative Attitude Scores on the Post Test
by Grade, Group, and Level of Primary Prior
Exposure (LPPE) (Somerville only)

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Grade(GD)	3	23.39	0.09	0.999
Group(GP)	1	1296.92	5.48	0.019
LPPE	1	981.38	4.14	0.040
GD x GP	3	1487.03	6.28	0.001
GD x LPPE	3	343.83	1.45	0.225
GP x LPPE	1	135.78	0.57	0.999
GD x GP x LPPE	3	136.85	0.57	0.999
ERROR	610	236.67		

	<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GRADE: 7	206	17.92	17.70	
8	180	17.38	17.53	
10	144	96.96	17.14	
12	96	16.85	16.76	0.03
GROUP: A	345	15.95	16.07	
B	281	19.14	18.99	0.10
LPPE: Low	450	18.26	18.17	
High	176	15.13	15.37	0.09

Mult. R. 0.131

Cell Means for Percent Negative Attitude Scores
on the Post Test by Grade, Group, and Level of
Primary Prior Exposure (LPPE) (Somerville only)

<u>Group A</u>						
LPPE:	Low			High		
GRADE	n	$\bar{x}$	s	n	$\bar{x}$	s
7	71	12.34	13.80	31	13.94	14.02
8	68	21.29	18.12	37	12.62	13.93
10	58	17.26	15.02	28	14.14	13.00
12	37	18.57	17.73	15	12.87	13.94

<u>Group B</u>						
LPPE:	Low			High		
GRADE	n	$\bar{x}$	s	n	$\bar{x}$	s
7	81	23.00	16.03	23	22.61	12.11
8	58	16.98	13.82	17	13.41	15.48
10	43	18.67	18.83	15	16.13	16.03
12	34	16.24	12.44	10	18.50	17.02

401

APPENDIX V

**Anova Results and Cell Means
by Group, Type of Intervention,
and Combined Level of Prior Program Exposure:
Pre-Test Scores and Change Scores**

PRE-TEST PERCENT CORRECT KNOWLEDGE SCORE MEANS BY GROUP,
TYPE OF INTERVENTION, AND COMBINED LEVEL OF PRIOR PROGRAM EXPOSURE

Group A

TI:PICC				IICC			RVCR		
CLPPE	n	$\bar{x}$	s	n	$\bar{x}$	s	n	$\bar{x}$	s
minimal	117	41.7	15.6	12	52.3	24.9	11	35.5	18.1
low	44	51.9	15.5	61	56.1	18.9	28	53.2	17.2
moderate	45	61.0	19.1	14	62.1	20.1	31	41.6	15.5
high	33	75.1	13.4	19	71.6	22.7	67	58.7	18.0

Group B

TI:PICC				IICC			RVCR		
CLPPE	n	$\bar{x}$	s	n	$\bar{x}$	s	n	$\bar{x}$	s
minimal	102	44.0	15.6	22	44.5	15.0	11	27.3	16.2
low	45	55.1	17.6	47	59.6	21.1	36	40.6	20.4
moderate	30	60.3	11.9	8	65.1	21.1	27	38.5	20.3
high	18	76.1	16.5	9	66.7	24.0	44	48.2	17.4

TI-Type of Intervention; namely the degree to which the CASPAR curriculum was implemented in the classroom by teacher

PICC-Proper implementation of CASPAR Curriculum in Classroom

IICC-Improper implementation of CASPAR Curriculum in Classroom

RVCR-Rival Comparison Curriculum

CLPPE-Combined Level of Prior Primary Exposure

GROUP A-Upper Limit Estimator

GROUP B-Lower Limit Estimator

ANOVA RESULTS

FOR PRE-TEST PERCENT CORRECT KNOWLEDGE SCORES BY GROUP, TYPE OF INTERVENTION, AND COMBINED LEVEL OF PRIOR PROGRAM EXPOSURE

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>P</u>
Group(G)	1	527.25	1.71	.188
TI	2	18228.32	59.20	.001
CLPPE	3	22812.06	74.09	.001
G x TI	2	1887.27	6.13	.002
G x CLPPE	3	97.83	0.32	.999
TI x CLPPE	6	1025.97	3.33	.003
G x TI x CLPPE	6	274.73	0.89	.999
ERROR	857	307.93		

	<u>n</u>	<u>Unadjusted Mean</u>	<u>Adjusted Mean</u>	<u>ETA</u>
Group: A	482	53.44	52.61	
B	399	50.04	51.04	
				0.08
TI: PICC	434	51.91	55.81	
ITCC	192	58.20	57.60	
RVCR	255	47.13	40.96	
				0.19
CLPPE: minimal	275	42.41	39.53	
low	261	53.37	52.42	
moderate	155	53.38	54.73	
high	190	62.41	66.79	
				0.36
Mult. R.	0.484			

ANOVA RESULTS

FOR PRE-TEST PERCENT UNCERTAIN KNOWLEDGE SCORES BY GROUP, TYPE OF INTERVENTION, AND COMBINED LEVEL OF PRIOR PROGRAM EXPOSURE

Source	df	ms	F	P
Group (G)	1	63.82	0.26	.999
TI	2	11763.30	47.47	.001
CLPPE	3	5460.45	22.04	.001
G x TI	2	1429.87	5.77	.003
G x CLPPE	3	367.35	1.48	.216
TI x CLPPE	6	445.37	1.80	.096
G x TI x CLPPE	6	105.31	0.43	.999
ERROR	857	247.80		

	n	Unadjusted Mean	Adjusted Mean	ETA
Group: A	482	16.75	17.20	
B	399	17.19	16.65	
				0.01
TI: PICC	434	14.76	12.99	
ITCC	192	14.09	14.10	
RVCR	255	22.83	25.84	
				0.22
CLPPE: minimal	275	19.45	22.27	
low	261	17.04	17.41	
moderate	155	17.66	16.63	
high	190	12.63	8.88	
				0.15
Mult. R.	0.342			

PRE-TEST PERCENT UNCERTAIN KNOWLEDGE SCORE MEANS BY GROUP, TYPE OF INTERVENTION, AND COMBINED LEVEL OF PRIOR PROGRAM EXPOSURE.

Group A

		TI:PICC		IICC			RVCR		
CLPPE	n	$\bar{x}$	s	n	$\bar{x}$	s	n	$\bar{x}$	s
minimal	117	19.2	16.2	12	14.7	11.8	11	27.3	16.8
low	44	19.0	14.6	61	13.6	14.5	28	25.0	17.5
moderate	45	11.9	13.3	14	8.6	13.8	31	28.1	13.3
high	33	7.0	9.1	19	9.5	16.2	67	15.7	15.4

Group B

		TI:PICC		IICC			RVCR		
CLPPE	n	$\bar{x}$	s	n	$\bar{x}$	s	n	$\bar{x}$	s
minimal	102	16.9	15.8	22	20.5	14.1	11	41.0	18.7
low	45	10.6	13.1	47	15.5	16.3	36	24.2	24.9
moderate	30	8.9	10.5	8	15.6	17.1	27	30.4	22.1
high	18	4.8	7.4	9	10.0	15.0	44	17.3	18.0

TI-Type of Intervention; namely the degree to which the CASPAR curriculum was implemented in the classroom by teacher

PICC-Proper implementation of CASPAR Curriculum in Classroom

IICC-Improper implementation of CASPAR Curriculum in Classroom

RVCR-Rival Comparison Curriculum

CLPPE-Combined Level of Prior Primary Exposure

GROUP A-Upper Limit Estimator

GROUP B-Lower Limit Estimator

ANOVA RESULTS

FOR PRE-TEST PERCENT INCORRECT KNOWLEDGE SCORES BY GROUP, TYPE OF INTERVENTION, AND COMBINED LEVEL OF PRIOR PROGRAM EXPOSURE

Source	df	ms	F	P
Group(G)	1	957.98	4.24	.038
TI	2	1176.12	5.20	.006
CLPPE	3	6329.12	27.98	.001
G x TI	2	1293.64	5.72	.004
G x CLPPE	3	346.23	1.53	.203
TI x CLPPE	6	783.44	3.46	.002
G x TI x CLPPE	6	429.77	1.90	.077
ERROR	857	226.21		

	n	Unadjusted Mean	Adjusted Mean	ETA
Group: A	482	29.81	30.20	
B	399	32.77	32.20	
				0.09
TI: PICC	434	33.32	31.21	
ITCC	192	27.71	28.31	
RVCR	255	30.04	33.19	
				0.14
CLPPE: minimal	275	38.14	38.21	
low	261	29.59	30.17	
moderate	155	28.96	28.64	
high	190	24.96	24.35	
				0.31
Mult. R.	0.333			

PRE-TEST PERCENT INCORRECT KNOWLEDGE SCORE MEANS BY GROUP, TYPE OF INTERVENTION, AND COMBINED LEVEL OF PRIOR PROGRAM EXPOSURE.

<u>Group A</u>									
		TI:PICC		IICC			RVCR		
CLPPE	n	$\bar{x}$	s	n	$\bar{x}$	s	n	$\bar{x}$	s
minimal	117	39.2	16.7	12	33.1	20.7	11	37.3	17.9
low	44	29.1	13.1	61	30.3	16.7	28	21.8	10.2
moderate	45	27.1	15.9	14	29.3	15.4	31	30.3	14.7
high	33	17.8	9.4	19	18.9	15.2	67	25.7	13.5

<u>Group B</u>									
		TI:PICC		IICC			RVCR		
CLPPE	n	$\bar{x}$	s	n	$\bar{x}$	s	n	$\bar{x}$	s
minimal	102	39.0	14.7	22	35.0	16.4	11	31.8	7.5
low	45	34.3	15.0	47	24.9	16.0	36	35.3	13.6
moderate	30	30.8	10.6	8	19.3	20.2	27	31.1	16.0
high	18	19.1	14.1	9	23.3	18.7	44	34.5	16.6

TI-Type of Intervention; namely the degree to which the CASPAR curriculum was implemented in the classroom by teacher

PICC-Proper implementation of CASPAR Curriculum in Classroom

IICC-Improper implementation of CASPAR Curriculum in Classroom

RVCR-Rival Comparison Curriculum

CLPPE-Combined Level of Prior Primary Exposure

GROUP A-Upper Limit Estimator

GROUP B-Lower Limit Estimator

ANOVA RESULTS

FOR PRE-TEST SCALED KNOWLEDGE SCORES BY GROUP, TYPE OF INTERVENTION,
AND COMBINED LEVEL OF PRIOR PROGRAM EXPOSURE

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>P</u>
Group (G)	1	726.66	64.39	.001
TI	2	6761.40	32.97	.001
CLPPE	3	13205.52	3.54	.057
G x TI	2	1232.98	6.01	.003
G x CLPPE	3	130.20	.64	.999
TI x CLPPE	6	793.37	3.87	.001
G x TI x CLPPE	6	325.93	1.59	.146
ERROR	857	205.10		

	<u>n</u>	<u>Unadjusted Mean</u>	<u>Adjusted Mean</u>	<u>ETA</u>
Group: A	482	61.82	61.21	
B	399	58.64	59.38	
				0.10
TI: PICC	434	59.30	62.31	
ITCC	192	62.25	64.65	
RVCR	255	58.55	53.89	
				0.16
CLPPE: minimal	275	52.14	50.66	
low	261	61.89	61.13	
moderate	155	62.22	63.05	
high	190	68.73	71.23	
				0.38

Mult. R. 0.452

PRE-TEST SCALED KNOWLEDGE SCORE MEANS BY GROUP, TYPE OF INTERVENTION,
AND COMBINED LEVEL OF PRIOR PROGRAM EXPOSURE.

<u>Group A</u>									
TI:PICC				IICC			RVCR		
CLPPE	n	$\bar{x}$	s	n	$\bar{x}$	s	n	$\bar{x}$	s
minimal	117	51.3	14.0	12	59.6	22.1	11	49.1	15.9
low	44	61.4	12.4	61	62.9	16.3	28	65.7	11.1
moderate	45	67.0	16.3	14	66.4	16.5	31	55.6	13.6
high	33	78.6	10.7	19	76.3	17.3	67	66.5	13.9

<u>Group B</u>									
TI:PICC				IICC			RVCR		
CLPPE	n	$\bar{x}$	s	n	$\bar{x}$	s	n	$\bar{x}$	s
minimal	102	52.5	12.9	22	54.7	14.0	11	47.7	8.5
low	45	60.4	15.0	47	67.3	16.8	36	52.6	12.1
moderate	30	64.7	10.0	8	72.9	18.8	27	53.7	14.6
high	18	78.5	14.9	9	71.7	20.2	44	56.8	14.5

TI-Type of Intervention; namely the degree to which the CASPAR curriculum was implemented in the classroom by teacher

PICC-Proper implementation of CASPAR Curriculum in Classroom

IICC-Improper implementation of CASPAR Curriculum in Classroom

RVCR-Rival Comparison Curriculum

CLPPE-Combined Level of Prior Primary Exposure

GROUP A-Upper Limit Estimator

GROUP B-Lower Limit Estimator

ANOVA RESULTS

FOR PRE-TEST PERCENT POSITIVE ATTITUDE SCORES BY GROUP, TYPE OF INTERVENTION, AND COMBINED LEVEL OF PRIOR PROGRAM EXPOSURE.

Source	df	ms	F	P
Group(G)	1	2749.15	10.14	.002
TI	2	641.12	2.36	.092
CLPPE	3	6131.14	22.60	.001
G x TI	2	26.24	.10	.999
G x CLPPE	3	526.99	1.94	.119
TI x CLPPE	6	1097.24	4.05	.001
G x TI x CLPPE	6	975.32	3.60	.002
ERROR	857	271.24		

	n	Unadjusted Mean	Adjusted Mean	ETA
Group: A	482	70.22	69.83	
B	399	65.78	66.26	
				0.13
TI: PICC	434	65.81	67.85	
ITCC	192	70.96	70.53	
RVCR	255	70.23	67.08	
				0.14
CLPPE: minimal	275	61.36	61.58	
low	261	69.17	68.75	
moderate	155	69.84	69.99	
high	190	75.47	75.60	
				0.29
Mult. R.	0.318			

PRE-TEST PERCENT CORRECT ATTITUDE SCORE MEANS BY GROUP, TYPE OF INTERVENTION, AND COMBINED LEVEL OF PRIOR PROGRAM EXPOSURE.

Group A

		TI:PICC		IICC			RVCR		
CLPPE	n	$\bar{x}$	s	n	$\bar{x}$	s	n	$\bar{x}$	s
minimal	117	61.5	16.9	12	76.1	11.0	11	64.5	18.6
low	44	72.7	16.3	61	68.5	16.9	28	67.5	17.3
moderate	45	70.0	15.1	14	84.2	11.3	31	67.1	17.4
high	33	78.9	14.1	19	76.3	16.4	67	79.1	14.1

Group B

		TI:PICC		IICC			RVCR		
CLPPE	n	$\bar{x}$	s	n	$\bar{x}$	s	n	$\bar{x}$	s
minimal	102	57.6	15.7	22	62.0	18.5	11	74.5	13.7
low	45	70.2	16.0	47	72.6	17.6	36	61.7	20.9
moderate	30	65.7	13.2	8	66.0	15.5	27	71.1	17.8
high	18	78.6	14.2	9	66.7	22.4	44	67.5	19.1

TI-Type of Intervention; namely the degree to which the CASPAR curriculum was implemented in the classroom by teacher

PICC-Proper implementation of CASPAR Curriculum in Classroom

IICC-Improper implementation of CASPAR Curriculum in Classroom

RVCR-Rival Comparison Curriculum

CLPPE-Combined Level of Prior Primary Exposure

GROUP A-Upper Limit Estimator

GROUP B-Lower Limit Estimator

ANOVA RESULTS

FOR PRE-TEST PERCENT UNCERTAIN ATTITUDE SCORES BY GROUP, TYPE OF INTERVENTION, AND COMBINED LEVEL OF PRIOR PROGRAM EXPOSURE

Source	df	ms	F	P
Group (G)	1	181.39	1.23	.267
TI	2	458.02	3.10	.044
CLPPE	3	1649.17	11.16	.001
G x TI	2	218.82	1.48	.226
G x CLPPE	3	127.32	.86	.999
TI x CLPPE	6	201.31	1.36	.226
G x TI x CLPPE	6	147.69	1.00	.999
ERROR	857	147.76		

	n	Unadjusted Mean	Adjusted Mean	ETA
Group: A	482	8.90	9.13	
B	399	8.48	8.21	
				0.02
TI: PICC	434	10.11	9.16	
ITCC	192	6.79	6.70	
RVCR	255	7.77	9.46	
				0.11
CLPPE: minimal	275	11.94	11.81	
low	261	8.69	9.22	
moderate	155	7.57	7.33	
high	190	4.99	4.66	
				0.20
Mult. R.	0.223			

PRE-TEST PERCENT UNCERTAIN ATTITUDE SCORE MEANS BY GROUP, TYPE OF INTERVENTION, AND COMBINED LEVEL OF PRIOR PROGRAM EXPOSURE

Group A									
TI:PICC				IICC			RVCR		
CLPPE	n	$\bar{x}$	s	n	$\bar{x}$	s	n	$\bar{x}$	s
minimal	117	12.9	16.1	12	9.2	9.2	11	8.2	12.5
low	44	11.9	14.5	61	8.4	11.9	28	8.9	11.3
moderate	45	8.3	10.6	14	3.9	7.0	31	10.0	13.4
high	33	5.5	8.1	19	4.2	8.4	67	4.5	8.2
Group B									
TI:PICC				IICC			RVCR		
CLPPE	n	$\bar{x}$	s	n	$\bar{x}$	s	n	$\bar{x}$	s
minimal	102	13.0	14.2	22	6.6	9.2	11	9.1	9.4
low	45	4.8	8.5	47	6.4	8.2	36	13.1	19.7
moderate	30	5.7	8.2	8	5.4	8.2	27	8.1	10.4
high	18	4.8	7.7	9	6.7	11.2	44	5.5	9.8

TI-Type of Intervention; namely the degree to which the CASPAR curriculum was implemented in the classroom by teacher

PICC-Proper implementation of CASPAR Curriculum in Classroom

IICC-Improper implementation of CASPAR Curriculum in Classroom

RVCR-Rival Comparison Curriculum

CLPPE-Combined Level of Prior Primary Exposure

GROUP A-Upper Limit Estimator

GROUP B-Lower Limit Estimator

ANOVA RESULTS

FOR PRE-TEST PERCENT NEGATIVE ATTITUDE SCORES BY GROUP, TYPE OF INTERVENTION, AND COMBINED LEVEL OF PRIOR PROGRAM EXPOSURE

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>P</u>
Group(G)	1	4305.20	19.47	.001
TI	2	83.50	.38	.999
CLPPE	3	1481.43	6.70	.001
G x TI	2	194.29	.88	.999
G x CLPPE	3	302.56	1.37	.250
TI x CLPPE	6	532.05	2.41	.026
G x TI x CLPPE	6	1011.89	4.58	.001
ERROR	857	221.14		

	<u>n</u>	<u>Unadjusted Mean</u>	<u>Adjusted Mean</u>	<u>ETA</u>
Group: A	482	20.50	20.67	
B	399	25.34	25.14	
				0.16
TI: PICC	434	23.38	22.33	
ITCC	192	22.04	22.52	
RVCR	255	22.00	23.44	
				0.04
CLPPE: minimal	275	26.05	26.13	
low	261	21.92	21.76	
moderate	155	22.13	22.20	
high	190	19.35	19.40	
				0.16
Mult. R.	0.218			

PRE-TEST PERCENT NEGATIVE ATTITUDE SCORE MEANS BY GROUP, TYPE OF INTERVENTION, AND COMBINED LEVEL OF PRIOR PROGRAM EXPOSURE.

<u>Group A</u>									
TI:PICC				IICC			RVCR		
CLPPE	n	$\bar{x}$	s	n	$\bar{x}$	s	n	$\bar{x}$	s
minimal	117	24.9	14.4	12	13.8	9.5	11	27.3	16.8
low	44	14.9	10.6	61	23.1	16.8	28	23.6	15.7
moderate	45	21.1	13.1	14	11.0	11.4	31	22.9	15.3
high	33	14.9	12.1	19	19.5	15.1	67	16.4	14.2
<u>Group B</u>									
TI:PICC				IICC			RVCR		
CLPPE	n	$\bar{x}$	s	n	$\bar{x}$	s	n	$\bar{x}$	s
minimal	102	28.7	13.8	22	30.9	15.5	11	16.4	11.2
low	45	24.3	18.1	47	21.1	14.9	36	25.3	18.3
moderate	30	27.7	14.4	8	28.0	14.3	27	20.7	14.1
high	18	15.9	15.8	9	26.7	20.0	44	27.0	17.3

TI-Type of Intervention; namely the degree to which the CASPAR curriculum was implemented in the classroom by teacher

PICC-Proper implementation of CASPAR Curriculum in Classroom

IICC-Improper implementation of CASPAR Curriculum in Classroom

RVCR-Rival Comparison Curriculum

CLPPE-Combined Level of Prior Primary Exposure

GROUP A-Upper Limit Estimator

GROUP B-Lower Limit Estimator

ANOVA RESULTS

FOR PRE-TEST SCALED ATTITUDE SCORES BY GROUP, TYPE OF INTERVENTION,
AND COMBINED LEVEL OF PRIOR PROGRAM EXPOSURE.

Source	df	ms	F	P
Group(G)	1	3500.64	16.73	.001
TI	2	218.59	1.05	.353
CLPPE	3	3432.24	16.40	.001
G x TI	2	59.91	.29	.999
G x CLPPE	3	384.83	1.84	.137
TI x CLPPE	6	749.18	3.58	.002
G x TI x CLPPE	6	947.59	4.53	.001
ERROR	857	209.25		

	n	Unadjusted Mean	Adjusted Mean	ETA
Group: A	482	74.67	74.40	
B	399	70.03	70.36	
				0.15
TI: PICC	434	70.87	72.43	
ITCC	192	74.36	73.88	
RVCR	255	74.12	71.82	
				0.11
CLPPE: minimal	275	67.33	67.49	
low	261	73.52	73.37	
moderate	155	73.63	73.66	
high	100	77.97	77.94	
				0.25
Mult. R.	0.290			

PRE-TEST SCALED ATTITUDE SCORE MEANS BY GROUP, TYPE OF INTERVENTION
AND COMBINED LEVEL OF PRIOR PROGRAM EXPOSURE

<u>Group A</u>									
		TI:PICC					IICC		
CLPPE	n	$\bar{x}$	s	n	$\bar{x}$	s	n	$\bar{x}$	s
minimal	117	67.9	13.5	12	80.7	9.2	11	68.6	16.6
low	44	78.6	11.7	61	72.7	15.7	28	72.0	15.5
moderate	45	74.1	13.1	14	86.2	10.9	31	72.1	14.9
high	33	81.7	12.6	19	78.4	15.2	67	78.4	13.6

<u>Group B</u>									
		TI:PICC					IICC		
CLPPE	n	$\bar{x}$	s	n	$\bar{x}$	s	n	$\bar{x}$	s
minimal	102	64.1	12.9	22	65.3	16.4	11	79.1	11.6
low	45	72.6	16.5	47	75.7	15.8	36	68.2	17.0
moderate	30	68.6	13.2	8	68.7	14.4	27	75.2	15.2
high	18	81.0	14.5	9	70.0	20.5	44	70.0	17.6

TI-Type of Intervention; namely the degree to which the CASPAR curriculum was implemented in the classroom by teacher

PICC-Proper implementation of CASPAR Curriculum in Classroom

IICC-Improper implementation of CASPAR Curriculum in Classroom

RVCR-Rival Comparison Curriculum

CLPPE-Combined Level of Prior Primary Exposure

GROUP A-Upper Limit Estimator

GROUP B-Lower Limit Estimator

ANOVA RESULTS FOR
Percent Change in Correct Knowledge Scores by
Group, Type of Intervention, and Combined Level
of Prior Primary Exposure

		<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GROUP:	A	482	19.68	20.12	0.06
	B	399	17.32	16.79	
TI:	PICC	434	23.22	21.07	0.22
	IICC	192	14.49	14.57	
	RVCR	255	13.87	17.47	
CLPPE:	minimal	275	26.86	25.62	0.31
	low	261	17.72	18.96	
	moderate	155	15.99	15.69	
	high	190	10.02	10.36	
<u>Source</u>		<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Group(G)		1	2394.16	6.61	.010
TI		2	2585.89	7.13	.001
CLPPE		3	7448.84	20.55	.001
G x TI		2	344.92	.95	.999
G x CLPPE		3	105.54	.29	.999
TI x CLPPE		6	1725.09	4.76	.001
G x TI x CLPPE		6	95.58	.26	.999
ERROR		857	362.49		
Mult. R.		0.338			

Cell Means for Percent Change in Correct Knowledge
Scores by Group, Type of Intervention, and Combined
Level of Prior Primary Exposure

<u>Group A</u>									
		TI:PICC			IICC			RVCR	
<u>CLPPE</u>	n	$\bar{x}$	s	n	$\bar{x}$	s	n	$\bar{x}$	s
minimal	117	29.4	19.4	12	14.7	19.5	11	33.6	12.9
low	44	26.2	22.6	61	18.5	23.3	28	11.4	19.4
moderate	45	17.6	17.8	14	4.8	17.7	31	20.3	18.0
high	33	14.3	15.1	19	7.4	16.6	67	9.4	17.2

<u>Group B</u>									
		TI:PICC			IICC			RVCR	
<u>CLPPE</u>	n	$\bar{x}$	s	n	$\bar{x}$	s	n	$\bar{x}$	s
minimal	102	26.6	18.9	22	11.5	22.2	11	30.9	18.7
low	45	17.0	19.8	47	17.0	22.1	36	10.3	20.9
moderate	30	13.2	13.2	8	7.6	12.2	27	17.8	15.5
high	18	11.0	14.2	9	10.0	20.6	44	7.0	17.5

TI = Type of Intervention; namely the degree to which the CASPAR Curriculum was implemented in the classroom by teacher

PICC = Proper Implementation of CASPAR Curriculum in Classroom

IICC = Improper Implementation of CASPAR Curriculum in Classroom

RVCR = Rival Comparison Curriculum

CLPPE = Combined Level of Prior Primary Exposure

GROUP A = Upper Limit Estimator

GROUP B = Lower Limit Estimator

ANOVA RESULTS FOR
Percent Change in Uncertain Knowledge Scores
by Group, Type of Intervention, and Combined
Level of Prior Primary Exposure

	<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GROUP: A	482	-10.78	-11.05	0.07
B	399	-8.41	-8.09	
TI: PICC	434	-8.33	-7.20	0.18
IICC	192	-6.81	-6.93	
RVCR	255	-14.23	-16.07	
CLPPE: minimal	275	-11.13	-13.07	0.08
low	261	-9.10	-9.66	
moderate	155	-10.54	-9.67	
high	190	-7.81	-4.95	
<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Group(G)	1	1890.18	7.86	.005
TI	2	6046.79	25.13	.001
CLPPE	3	1994.30	8.29	.001
G x TI	2	863.52	3.59	.027
G x CLPPE	3	324.68	1.35	.256
TI x CLPPE	6	746.78	3.10	.005
G x TI x CLPPE	6	375.71	1.56	.154
ERROR	857	240.64		
Mult. R.	0.255			

Cell Means for Percent Change in Uncertain
knowledge Scores by Group, Type of Intervention,
and Combined Level of Prior Primary Exposure

<u>Group A</u>									
<u>CLPPE</u>	<u>TI:PICC</u>			<u>IICC</u>			<u>RVCR</u>		
	<u>n</u>	<u>$\bar{x}$</u>	<u>s</u>	<u>n</u>	<u>$\bar{x}$</u>	<u>s</u>	<u>n</u>	<u>$\bar{x}$</u>	<u>s</u>
minimal	117	-12.2	17.6	12	-7.3	13.5	11	-21.8	18.3
low	44	-13.5	14.4	61	-6.7	16.2	28	-17.5	17.3
moderate	45	-6.6	14.8	14	-6.3	13.4	31	-18.4	13.7
high	33	-4.8	10.6	19	-5.3	12.2	67	-11.0	13.8

<u>Group B</u>									
<u>CLPPE</u>	<u>TI:PICC</u>			<u>IICC</u>			<u>RVCR</u>		
	<u>n</u>	<u>$\bar{x}$</u>	<u>s</u>	<u>n</u>	<u>$\bar{x}$</u>	<u>s</u>	<u>n</u>	<u>$\bar{x}$</u>	<u>s</u>
minimal	102	-8.5	16.1	22	-3.5	17.5	11	-33.6	21.1
low	45	-2.1	14.7	47	-9.6	14.4	36	-9.4	19.7
moderate	30	-4.2	13.0	8	-7.9	7.2	27	-18.1	17.8
high	18	-3.1	7.4	9	-4.4	12.4	44	-8.9	15.4

TI = Type of Intervention; namely the degree to which the CASPAR Curriculum was implemented in the classroom by teacher

PICC = Proper Implementation of CASPAR Curriculum in Classroom

IICC = Improper Implementation of CASPAR Curriculum in Classroom

RVCR = Rival Comparison Curriculum

CLPPE = Combined Level of Prior Primary Exposure

GROUP A = Upper Limit Estimator

GROUP B = Lower Limit Estimator

ANOVA RESULTS FOR
Percent Change in Incorrect Knowledge Scores
by Group, Type of Intervention, and Combined
Level of Prior Primary Exposure

		<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GROUP:	A	482	-8.54	-8.72	0.00
	B	399	-8.56	-8.35	
TI:	PICC	434	-14.53	-13.51	0.36
	IICC	192	-7.32	-7.29	
	RVCR	255	.71	-1.05	
CLPPE:	minimal	275	-15.39	-12.20	0.28
	low	261	-8.26	-8.95	
	moderate	155	-5.11	-5.68	
	high	190	-1.56	-5.06	

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>	
Group(G)	1	29.75	0.11	.999	
TI	2	10161.22	36.08	.001	
CLPPE	3	1999.70	7.10	.001	
G x TI	2	124.86	.44	.999	
G x CLPPE	3	77.61	.28	.999	
TI x CLPPE	6	493.20	1.75	.105	
G x TI x CLPPE	6	405.41	1.44	.195	
ERROR	857	281.62			
Mult. R.	0.388				

Cell Means for Percent Change in Incorrect
Knowledge Scores by Group, Type of Intervention,
and Combined Level of Prior Primary Exposure

<u>Group A</u>									
	TI:PICC			IICC			RVCR		
<u>CLPPE</u>	n	$\bar{x}$	s	n	$\bar{x}$	s	n	$\bar{x}$	s
minimal	117	-17.2	19.2	12	-7.3	19.0	11	-11.8	17.8
low	44	-12.7	18.1	51	-11.8	20.3	28	6.1	15.0
moderate	45	-11.0	16.7	14	1.5	12.9	31	-1.9	13.8
high	33	-9.4	12.2	19	-2.1	14.7	67	1.6	14.6

<u>Group B</u>									
	TI:PICC			IICC			RVCR		
<u>CLPPE</u>	n	$\bar{x}$	s	n	$\bar{x}$	s	n	$\bar{x}$	s
minimal	102	-18.1	16.0	22	-8.3	18.8	11	2.7	15.6
low	45	-14.8	16.6	47	-7.4	18.0	36	-.8	17.6
moderate	30	-9.0	12.4	8	.3	9.9	27	.4	15.1
high	18	-7.9	10.5	9	-5.6	16.7	44	1.8	18.7

TI = Type of Intervention; namely the degree to which the CASPAR Curriculum was implemented in the classroom by teacher

PICC = Proper Implementation of CASPAR Curriculum in Classroom

IICC = Improper Implementation of CASPAR Curriculum in Classroom

RVCR = Rival Comparison Curriculum

CLPPE = Combined Level of Prior Primary Exposure

GROUP A = Upper Limit Estimator

GROUP B = Lower Limit Estimator

ANOVA RESULTS FOR
Percent Change in Knowledge Scaled Scores by
Group, Type of Intervention, and Combined Level
of Prior Primary Exposure

	<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GROUP: A	482	13.94	14.25	0.03
B	399	12.77	12.40	
TI: PICC	434	18.70	17.12	0.31
IICC	192	10.74	10.76	
RVCR	255	6.41	9.09	
CLPPE: minimal	275	20.95	18.74	0.32
low	261	12.82	13.78	
moderate	155	10.38	10.52	
high	190	5.77	7.54	

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Group(G)	1	739.40	2.82	.089
TI	2	4861.86	18.56	.001
CLPPE	3	4225.69	16.14	.001
G x TI	2	19.01	.07	.999
G x CLPPE	3	10.41	.04	.999
TI x CLPPE	6	922.45	3.52	.002
G x TI x CLPPE	6	156.57	.60	.999
ERROR	857	261.89		
Mult. R.	0.388			

Cell Means for Percent Change in Knowledge Scaled
Scores by Group, Type of Intervention, and Combined
Level of Prior Primary Exposure

<u>Group A</u>									
<u>CLPPE</u>	<u>TI:PICC</u>			<u>IICC</u>			<u>RVCR</u>		
	<u>n</u>	<u>$\bar{x}$</u>	<u>s</u>	<u>n</u>	<u>$\bar{x}$</u>	<u>s</u>	<u>n</u>	<u>$\bar{x}$</u>	<u>s</u>
minimal	117	23.2	17.2	12	11.0	18.0	11	22.7	12.5
low	44	19.5	19.2	61	15.2	20.3	28	2.6	15.0
moderate	45	14.3	15.6	14	1.6	13.9	31	11.1	14.5
high	33	11.8	12.7	19	4.7	14.5	67	3.9	14.4

<u>Group B</u>									
<u>CLPPE</u>	<u>TI:PICC</u>			<u>IICC</u>			<u>RVCR</u>		
	<u>n</u>	<u>$\bar{x}$</u>	<u>s</u>	<u>n</u>	<u>$\bar{x}$</u>	<u>s</u>	<u>n</u>	<u>$\bar{x}$</u>	<u>s</u>
minimal	102	22.4	15.5	22	9.9	18.6	21	14.1	13.6
low	45	15.9	16.7	47	12.2	18.8	36	5.6	16.6
moderate	30	11.1	11.0	8	3.7	10.5	27	8.7	12.4
high	18	9.5	12.0	9	7.8	17.7	44	2.6	16.4

TI = Type of Intervention; namely the degree to which the CASPAR Curriculum was implemented in the classroom by teacher

PICC = Proper Implementation of CASPAR Curriculum in Classroom

IICC = Improper Implementation of CASPAR Curriculum in Classroom

RVCR = Rival Comparison Curriculum

CLPPE = Combined Level of Prior Primary Exposure

GROUP A = Upper Limit Estimator

GROUP B = Lower Limit Estimator

ANOVA RESULTS FOR
Percent Change in Positive Attitude Scores
by Group, Type of Intervention, and Combined
Level of Prior Primary Exposure

		<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GROUP:	A	482	6.24	6.41	0.00
	B	399	6.41	6.21	
TI:	PICC	434	10.77	9.54	0.25
	IICC	192	.96	1.53	
	RVCR	255	2.78	4.44	
CLPPE:	minimal	275	11.89	10.08	0.23
	low	261	3.75	5.10	
	moderate	155	6.81	6.63	
	high	190	1.38	2.30	
					0.23

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Group(G)	1	8.63	.029	.999
TI	2	4123.97	13.91	.001
CLPPE	3	1963.31	6.62	.001
G x TI	2	397.00	1.34	.262
G x CLPPE	3	29.75	.10	.999
TI x CLPPE	6	370.35	1.25	.278
G x TI x CLPPE	6	127.26	.43	.999
ERROR	857	296.53		
Mult. R.	0.287			

Cell Means for Percent Change in Positive Attitude
Scores by Group, Type of Intervention, and Combined
Level of Prior Primary Exposure

<u>Group A</u>									
		TI:PICC			IICC			RVCR	
<u>CLPPE</u>	n	$\bar{x}$	s	n	$\bar{x}$	s	n	$\bar{x}$	s
minimal	117	15.3	17.9	12	4.8	16.0	11	.9	10.4
low	44	8.5	15.5	61	-2.1	23.6	28	4.3	14.5
moderate	45	8.0	15.7	14	.9	8.2	31	8.1	17.6
high	3	6.7	12.8	19	-1.6	14.2	67	-.4	16.2

<u>Group B</u>									
		TI:PICC			IICC			RVCR	
<u>CLPPE</u>	n	$\bar{x}$	s	n	$\bar{x}$	s	n	$\bar{x}$	s
minimal	102	12.9	18.2	22	1.3	14.2	11	6.4	18.6
low	45	7.2	17.7	47	3.2	16.2	36	3.9	17.6
moderate	30	6.5	14.8	8	9.6	9.2	27	5.9	20.8
high	18	5.1	10.9	9	2.2	17.2	44	-.2	19.3

TI = Type of Intervention; namely the degree to which the CASPAR Curriculum was implemented in the classroom by teacher

PICC = Proper Implementation of CASPAR Curriculum in Classroom

IICC = Improper Implementation of CASPAR Curriculum in Classroom

RVCR = Rival Comparison Curriculum

CLPPE = Combined Level of Prior Primary Exposure

GROUP A = Upper Limit Estimator

GROUP B = Lower Limit Estimator

ANOVA RESULTS FOR
Percent Change in Uncertain Attitude Scores by
Group, Type of Intervention, and Combined Level
of Prior Primary Exposure

	<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GROUP: A	482	-3.10	-3.23	
B	399	-1.27	-1.11	0.07
TI: PICC	434	-2.72	-2.09	
IICC	192	- .66	-0.75	
RVCR	255	-2.71	-3.72	0.07
CLPPE: minimal	275	-4.02	-4.32	
low	261	-1.78	-2.19	
moderate	155	-1.86	-1.55	
high	190	- .75	0.00	0.10

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Group(G)	1	966.76	6.39	.011
TI	2	440.85	2.91	.053
CLPPE	3	590.83	3.91	.009
G x TI	2	103.80	.69	.999
G x CLPPE	3	120.63	.80	.999
TI x CLPPE	6	66.97	.44	.999
G x TI x CLPPE	6	104.52	.69	.999
ERROR	857	151.30		
Mult. R.	0.153			

Cell Means for Percent Change in Uncertain Attitude
Scores by Group, Type of Intervention, and Combined
Level of Prior Primary Exposure

<u>Group A</u>									
<u>CLPPE</u>	<u>TI:PICC</u>			<u>IICC</u>			<u>RVCR</u>		
	<u>n</u>	<u>$\bar{x}$</u>	<u>s</u>	<u>n</u>	<u>$\bar{x}$</u>	<u>s</u>	<u>n</u>	<u>$\bar{x}$</u>	<u>s</u>
minimal	117	-5.0	16.1	12	-3.7	7.2	11	-1.8	16.0
low	44	-5.2	13.7	61	-1.3	12.6	28	-5.	10.4
moderate	45	-1.8	11.3	14	-0.8	9.1	31	-4.8	11.2
high	33	- .2	9.9	19	1.1	10.5	67	-2.4	9.1

<u>Group B</u>									
<u>CLPPE</u>	<u>TI:PICC</u>			<u>IICC</u>			<u>RVCR</u>		
	<u>n</u>	<u>$\bar{x}$</u>	<u>s</u>	<u>n</u>	<u>$\bar{x}$</u>	<u>s</u>	<u>n</u>	<u>$\bar{x}$</u>	<u>s</u>
minimal	102	-3.9	15.1	22	.4	8.6	11	-5.5	8.2
low	45	2.2	10.4	47	- .4	10.0	36	-2.5	14.2
moderate	30	1.2	8.7	8	-1.4	3.9	27	-2.6	11.0
high	18	- .2	11.2	9	1.1	6.0	44	0.0	11.2

TI = Type of Intervention; namely the degree to which the CASPAR Curriculum was implemented in the classroom by teacher

PICC = Proper Implementation of CASPAR Curriculum in Classroom

IICC = Improper Implementation of CASPAR Curriculum in Classroom

RVCR = Rival Comparison Curriculum

CLPPE = Combined Level of Prior Primary Exposure

GROUP A = Upper Limit Estimator

GROUP B = Lower Limit Estimator

ANOVA RESULTS FOR
Percent Change in Negative Attitude Scores by
Group, Type of Intervention, and Combined Level
of Prior Primary Exposure

	<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GROUP: A	482	-3.09	-3.13	
B	399	-5.10	-5.05	0.06
TI: PICC	434	-7.96	-7.36	
IICC	192	- .27	- .75	
RVCR	255	- .08	- .72	0.25
CLPPE: minimal	275	-7.78	-5.70	
low	261	-1.95	-2.88	
moderate	155	-4.90	-5.03	
high	190	- .60	-2.25	0.18

<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>
Group(G)	1	798.17	3.36	.064
TI	2	3936.11	16.59	.001
CLPPE	3	517.45	2.18	.087
G x TI	2	113.33	.48	.999
G x CLPPE	3	257.10	1.08	.356
TI x CLPPE	6	135.23	.57	.999
G x TI x CLPPE	6	79.95	.34	.999
ERROR	857	237.28		
Mult. R.	0.267			

Cell Means for Percent Change in Negative Attitude Scores by Group, Type of Intervention, and Combined Level of Prior Primary Exposure

<u>Group A</u>									
<u>CLPPE</u>	<u>TI:PICC</u>			<u>IICC</u>			<u>RVCR</u>		
	<u>n</u>	<u>$\bar{x}$</u>	<u>s</u>	<u>n</u>	<u>$\bar{x}$</u>	<u>s</u>	<u>n</u>	<u>$\bar{x}$</u>	<u>s</u>
minimal	117	-10.2	14.1	12	-0.9	13.6	11	0.9	13.8
low	44	- 3.2	11.1	61	3.4	22.0	28	0.7	14.9
moderate	45	- 6.1	12.7	14	0.0	7.5	31	-3.2	15.8
high	33	- 6.4	10.0	19	0.5	13.5	67	2.8	14.8

<u>Group B</u>									
<u>CLPPE</u>	<u>TI:PICC</u>			<u>IICC</u>			<u>RVCR</u>		
	<u>n</u>	<u>$\bar{x}$</u>	<u>s</u>	<u>n</u>	<u>$\bar{x}$</u>	<u>s</u>	<u>n</u>	<u>$\bar{x}$</u>	<u>s</u>
minimal	102	- 8.9	18.2	22	-1.6	14.8	11	- .9	13.8
low	45	- 9.3	16.5	47	-2.8	14.6	36	-1.4	17.3
moderate	30	- 7.6	16.5	8	-8.1	7.7	27	-3.3	15.7
high	18	- 4.6	11.5	9	-3.3	15.8	44	.2	19.1

TI = Type of Intervention; namely the degree to which the CASPAR Curriculum was implemented in the classroom by teacher

PICC = Proper Implementation of CASPAR Curriculum in Classroom

IICC = Improper Implementation of CASPAR Curriculum in Classroom

RVCR = Rival Comparison Curriculum

CLPPE = Combined Level of Prior Primary Exposure

GROUP A = Upper Limit Estimator

GROUP B = Lower Limit Estimator

ANOVA RESULTS FOR
Percent Change in Attitude Scaled Scores by
Group, Type of Intervention, and Combined Level
of Prior Primary Exposure

		<u>n</u>	<u>UNADJUSTED MEAN</u>	<u>ADJUSTED MEAN</u>	<u>ETA</u>
GROUP:	A	482	4.70	4.80	0.03
	B	399	5.78	5.66	
TI:	PICC	434	9.41	8.50	0.26
	IICC	192	.63	1.16	
	RVCR	255	1.43	2.59	
CLPPE:	minimal	175	9.89	7.92	0.22
	low	261	2.87	4.01	
	moderate	155	5.88	5.86	
	high	190	1.01	2.31	
<u>Source</u>	<u>df</u>	<u>ms</u>	<u>F</u>	<u>p</u>	
Group(G)	1	158.98	.69	.999	
TI	2	3965.07	17.27	.001	
CLPPE	3	1096.13	4.77	.003	
G x TI	2	228.12	.99	.999	
G x CLPPE	3	115.18	.50	.999	
TI x CLPPE	6	236.68	1.03	.404	
G x TI x CLPPE	6	76.81	.33	.999	
ERROR	857	229.65			
Mult. R.	0.294				

Cell Means for Percent Change in Attitude Scaled
Scores by Group, Type of Intervention, and Combined
Level of Prior Primary Exposure

<u>Group A</u>									
<u>CLPPE</u>	<u>TI:PICC</u>			<u>IICC</u>			<u>RVCR</u>		
	<u>n</u>	<u>$\bar{x}$</u>	<u>s</u>	<u>n</u>	<u>$\bar{x}$</u>	<u>s</u>	<u>n</u>	<u>$\bar{x}$</u>	<u>s</u>
minimal	117	12.8	14.0	12	2.9	14.4	11	0.0	9.2
low	44	5.9	11.6	61	-2.8	21.9	28	1.8	13.8
moderate	45	7.1	13.2	14	0.5	6.5	31	5.6	15.7
high	33	6.6	10.5	19	-1.1	12.9	67	-1.6	14.9

<u>Group B</u>									
<u>CLPPE</u>	<u>TI:PICC</u>			<u>IICC</u>			<u>RVCR</u>		
	<u>n</u>	<u>$\bar{x}$</u>	<u>s</u>	<u>n</u>	<u>$\bar{x}$</u>	<u>s</u>	<u>n</u>	<u>$\bar{x}$</u>	<u>s</u>
minimal	102	10.9	15.5	22	1.5	13.9	11	3.6	15.8
low	45	8.3	16.4	47	3.0	14.5	36	2.6	15.9
moderate	30	7.1	15.1	8	8.9	8.3	27	4.6	17.6
high	18	4.9	9.7	9	2.8	16.2	44	-0.2	18.4

TI = Type of Intervention; namely the degree to which the CASPAR Curriculum was implemented in the classroom by teacher

PICC = Proper Implementation of CASPAR Curriculum in Classroom

IICC = Improper Implementation of CASPAR Curriculum in Classroom

RVCR = Rival Comparison Curriculum

CLPPE = Combined Level of Prior Primary Exposure

GROUP A = Upper Limit Estimator

GROUP B = Lower Limit Estimator

APPENDIX VI

Development and Methodological
use of Critical Features Scale

APPENDIX VI

DEVELOPMENT OF CRITICAL FEATURES SCALE

In addition to administering pre and post questionnaires and student feedback sheets using the code name procedure (see Carifio and Biron, 1978), cycle 1 teachers were asked to fill in a process log after each session. Teachers logged their observations for ten sessions for two different groups of students. (See Chapter IX).

The teacher process log systematically examined many important group-level dimensions of each session such as class mood, effectiveness of class activities, and selected student reactions. The rating of these dimensions gave a quick summary of each teacher's perception of his/her students for each session. General hypothetical statements could then be drawn concerning the success of each session in relation to the stated objectives and observed student behaviors.

As previously stated, micro-evaluation cycle 1 teachers began to observe student behaviors that did not fit into the group-level ratings. Students reacted to the material not only in the expected, generally classifiable ways but in quite unforeseen individualistic ways. At the end of their logs, teachers expressed their surprise and concern by writing such comments as the following:

"Many comments were made by students about problems at home. One girl admitted to a description (exclaiming) 'that's me!'"

"Several students told me that their parents were glad that they (the students) were learning about alcohol. One said that one of his parents who belongs to AA would send in some pamphlets."

"(in the problems assessment), one girl wrote in detail her problems (Dear Abby letter) and signed her name. Had opportunity to talk to her later and referred her."

"Some students who are completely turned off on ISCS (the science curriculum) were wide awake, participating, volunteering information, speaking to me individually. Amazing!"

"One boy brought in a bottle labelled Metaxa (a Greek brandy) and one labelled Anisette. This was entirely his own idea. It was one reason why some students got over-excited."

These comments reveal the intensity and individuality of particular student reactions. The constructed instruments had not been designed for evaluating such behaviors. They had been developed within the framework of general pre-to-post, group level gains and not the more particular surface-to-depth, individual-level changes. An instrument or procedure developed within this latter idiographic framework needed to be constructed in order to track these important observations.

By means of conversations with these teachers and other teachers who had previously held alcohol education sessions, a preliminary procedure was developed. It was labelled the Critical Features Scale and was incorporated in the revised teacher's process logs for the second cycle of the curriculum. Table I presents form Ia of the Critical Features Scale.

Table I: Form Ia of Critical Features Scale

Check critical feature(s) observed and fill-in student code name(s) for each.

___ Active student becomes observably passive	_____	_____	_____	_____
___ Passive student becomes observably active	_____	_____	_____	_____
___ Student comes after school for help	_____	_____	_____	_____
___ Student is referred	_____	_____	_____	_____
___ Student hangs around after class asking questions	_____	_____	_____	_____
___ Student becomes very emotional: cries, gets angry, etc.	_____	_____	_____	_____
___ Student mentions talking to his/her family about the course	_____	_____	_____	_____
___ Student talks about own drinking problem	_____	_____	_____	_____
___ Student talks about drinking problem of someone close	_____	_____	_____	_____
___ Other (explain)	_____	_____	_____	_____

From follow-up conversations with cycle II teachers concerning the use of the scale, the following ambiguities concerning two categories surfaced:

a. Teachers were uncertain whether the category "Student comes after school for help" referred to personal or curriculum related assistance, and

b. Teachers were also uncertain whether the categories "Student talks about own drinking problem" and "Student talks about drinking problem of someone close" referred to talking privately or making general classroom comments.

To eliminate these ambiguities, the following changes in the scale were made:

a. The category "Student makes revealing comments in class." was added.

b. The category "Student is referred" was changed to "Student seeks help and is referred."

c. The words "or school" were added to the category "Student hangs around after class (or school) asking questions." The category "Student comes after school for help" was dropped.

d. The word "privately" was added to the categories concerning students talking about their or someone else's drinking problems.

These changes were incorporated in the CRITICAL FEATURES SCALES used in micro-evaluation cycles III and IV as shown in Table II.

The two forms of the scale (Ia & Ib) were compared and there was a tendency for the revised form (Ib) to be more sensitive than the original form (Ia) for total unique identifications (ratios of 5.1 and 7.2 respectively). For Level III unique identifications, form (Ia) tended to be slightly more sensitive than form (Ib) (ratio of 31.9 and 47.3 respectively). Table III represents the number of teachers for each form according to teacher sex, school level, and implementation.

As can be seen from the Table, form (Ia) which seems to be less sensitive for total unique identifications predominates in the senior high and proper implementation while the opposite is true for form (Ib). The existence of these disproportions and their possible effects must be kept in mind when interpreting the results, though the possible influences would tend to reinforce findings of no significant difference between school levels and types of implementations.

Table II: Form (Ib) of Critical Features Scale

CRITICAL FEATURES: For each critical feature observed, fill in student code name(s).

1. Active student becomes observably passive _____
2. Passive student becomes observably active _____
3. Student makes revealing comments in class _____
4. Student seeks help and is referred _____
5. Student hangs around after class or school asking questions _____
6. Student becomes very emotional: cries, gets angry, etc. _____
7. Student mentions talking to his/her family about the course _____
8. Student privately talks about own drinking problem _____
9. Student privately talks about drinking problem of someone close _____
10. Other (explain): _____

Table III

Number of Teachers Per Form by Teacher Sex, School Level, and Implementation

		<u>Forms</u>	
		<u>(Ia)</u>	<u>(Ib)</u>
<u>Sex</u>	Male	3	3
	Female	4	5
<u>School Level</u>	Junior High	3	6
	Senior High	5	2
<u>Implementation</u>	Proper	6	3
	Improper	1	5

Methodological Use of the Critical Features Scale

In order to track the observations of individual students over time, a code name procedure to be used by the teachers was introduced. Each teacher was allowed to invent his/her own codes for students. However, the code name had to meet the following requirements.

1. It should be no more than seven letters (there is only so much space to fill in the names on a page).
2. Each student must have a unique code name. We suggested that it might be helpful for them to keep their own master list of student names and their codes so that they would not be forgotten or duplicated.
3. Each student must have a code name that ends in M (for male) and F (for female).
4. The code name does not have to be pronounceable or aesthetically pleasing.
5. The code name should be very difficult to crack, i.e., others including students, should not be able to figure out someone's identity from the code. (For example, if you use first initials, someone might try to figure out names according to classlists.)

Teachers were then given possible rules for generating their own code names such as first letter of the person's hair color or eye color. One chemistry teacher decided to use the periodic table as a means of coding the students.

Teachers were asked to use code names so that it would be possible to sort out the identifications. If checks or frequencies were used, it would be impossible to tell if the identifications were of one, some, or of many students. Also, it would be impossible to track individual student's identifications across categories and sessions in order to build profiles.

Two female teachers, one in the 7th and one in the 10th grade did not use code names but gave simply frequencies and descriptions of what happened. The 10th grade teacher's identifications were made only in the "other" category and because there were only four and she explained separately what happened for each, they were assumed to be different students. For the 7th grade teacher the individual identifications were approximated as best as possible using her added descriptions and taking into account possible repetitions. Also, another 10th grade teacher used "several" once in an "other" category. This was conservatively estimated (3) to take into account repetitions among her other code names.

Only 5 of the teachers used code names by which the students' sex could be ascertained. Two of the teachers were 8th grade female teachers, one was a 10th grade female teacher, and the other two were 12th grade male teachers.

APPENDIX VII

Anova Results and Cell Means
by Implementation, School Level,
Group and Sex: Student
Feedback Scale Scores

Percent "Hard-Easy" Student Feedback Scale Item Scores According to School Level, Group, Implementation and Student Sex. (N=603)

	Proper						Improper					
	N	A	$\bar{X}$	N	B	$\bar{X}$	N	A	$\bar{X}$	N	B	$\bar{X}$
Junior High Males	72		81.64	69		85.58	22		84.86	13		85.39
Females	<u>85</u>		<u>78.54</u>	<u>71</u>		<u>82.21</u>	<u>21</u>		<u>88.14</u>	<u>22</u>		<u>83.50</u>
Total	157		79.96	140		83.87	43		86.47	35		84.20
Senior High Males	26		88.35	16		85.06	37		79.78	29		85.28
Females	<u>48</u>		<u>83.17</u>	<u>33</u>		<u>81.79</u>	<u>23</u>		<u>74.78</u>	<u>16</u>		<u>71.56</u>
Total	74		84.99	49		82.86	60		77.87	45		80.40

Four Way Analysis of Variance of Percent "Hard-Easy" Student Feedback Scale Item Scores According to School Level, Group, Implementation, and Student Sex.

<u>Source</u>	<u>df</u>	<u>Mean Square</u>	<u>F</u>	<u>p</u>
Level	1	36.24	0.15	0.999
Group	1	301.53	1.26	0.261
Impl.	1	170.13	0.71	0.999
Sex	1	1487.11	6.21	0.012
Level x Group	1	137.55	0.58	0.999
Level x Impl.	1	3436.89	14.36	0.001
Level x Sex	1	505.60	2.11	0.142
Group x Impl.	1	56.86	.24	0.999
Group x Sex	1	199.95	.84	0.999
Impl. x Sex	1	6.00	.03	0.999
Level x Group x Impl.	1	605.97	2.53	0.108
Level x Group x Sex	1	1.57	.01	0.999
Level x Impl. x Sex	1	504.53	2.11	0.143
Group x Impl. x Sex	1	348.16	1.46	0.223
LevelxGroupxImpl.xSex	1	69.41	0.29	0.999
Error	580	239.37		

Percent "Confusing-Clear" Student Feedback Scale Item Scores
According to School Level, Group, Implementation and Student
Sex (N=604)

		Proper				Improper			
		N	A $\bar{X}$	N	B $\bar{X}$	N	A $\bar{X}$	N	B $\bar{X}$
3 III	Junior High Males	72	83.50	69	80.77	22	79.32	13	75.39
	Females	<u>85</u>	<u>82.84</u>	<u>71</u>	<u>82.28</u>	<u>21</u>	<u>83.29</u>	<u>23</u>	<u>82.26</u>
	Total	157	83.14	140	81.54	43	81.26	36	79.78
3 IV	Senior High Males	26	81.54	16	78.31	37	84.35	29	81.90
	Females	<u>48</u>	<u>84.25</u>	<u>33</u>	<u>81.67</u>	<u>23</u>	<u>79.09</u>	<u>16</u>	<u>66.31</u>
	Total	74	83.30	49	80.57	60	82.33	45	76.36

Four Way Analysis of Variance of Percent "Confusing-Clear" Student Feedback Scale Item Scores According to School Level, Group, Implementation and Student Sex.

<u>Source</u>	<u>df</u>	<u>Mean Square</u>	<u>F</u>	<u>p</u>
Level	1	11.14	0.04	0.999
Group	1	710.58	2.33	0.123
Impl.	1	599.83	1.97	0.157
Sex	1	22.59	0.07	0.999
Level x Group	1	143.75	0.47	0.999
Level x Impl.	1	6.02	0.02	0.999
Level x Sex	1	463.29	1.52	0.216
Group x Impl.	1	57.41	0.19	0.999
Group x Sex	1	27.59	0.09	0.999
Impl. x Sex	1	213.02	0.70	0.999
Level x Group x Impl.	1	45.06	0.15	0.999
Level x Group x Sex	1	268.73	0.88	0.999
Level x Impl. x Sex	1	2716.49	8.91	0.003
Group x Impl. x Sex	1	147.07	0.48	0.999
LevelxGroupxImpl.xSex	1	389.50	1.28	0.258
Error	580	304.98		

Percent "Boring-Interesting" Student Feedback Scale Item Scores
According to School Level, Group, Implementation and Student
Sex (N=602)

	Proper				Improper							
	N	A	$\bar{X}$	N	B	$\bar{X}$	N	A	$\bar{X}$	N	B	$\bar{X}$
Junior High Males	72		77.42	69		79.62	21		82.00	12		77.33
Females	<u>84</u>		<u>81.45</u>	<u>71</u>		<u>80.25</u>	<u>21</u>		<u>91.38</u>	<u>23</u>		<u>82.30</u>
Total	156		79.59	140		79.94	42		82.00	35		80.60
Senior High Males	26		78.15	16		63.06	37		75.16	29		72.07
Females	<u>48</u>		<u>83.21</u>	<u>33</u>		<u>81.09</u>	<u>23</u>		<u>79.39</u>	<u>17</u>		<u>75.88</u>
Total	74		81.43	49		75.20	60		76.78	46		73.48

Four Way Analysis of Variance of Percent "Boring-
Interesting" Student Feedback Scale Item Scores
According to School Level, Groups, Implementation
and Student Sex

<u>Source</u>	<u>df</u>	<u>Mean Square</u>	<u>F</u>	<u>p</u>
Level	1	1629.78	4.11	.034
Group	1	979.26	2.65	0.100
Impl.	1	119.45	0.32	0.999
Sex	1	3245.40	8.79	0.003
Level x Group	1	198.80	0.54	0.999
Level x Impl.	1	700.64	1.90	0.165
Level x Sex	1	469.48	1.27	0.259
Group x Impl.	1	71.48	0.19	0.999
Group x Sex	1	35.54	0.10	0.999
Impl. x Sex	1	25.19	0.07	0.999
Level x Group x Impl.	1	1118.79	3.03	0.078
Level x Group x Sex	1	852.33	2.31	0.125
Level x Impl. x Sex	1	1034.24	2.80	0.091
Group x Impl. x Sex	1	538.65	1.46	0.225
LevelxGroupxImpl.xSex	1	304.97	0.83	0.999
Error	580	369.27		

Percent "Not New to Me - New to Me" Student Feedback Scale Item Scores
According to School Level, Group, Implementation and Student Sex. (N=598)

		Proper				Improper			
		N	A $\bar{X}$	N	B $\bar{X}$	N	A $\bar{X}$	N	B $\bar{X}$
Junior High	Males	71	63.27	68	61.49	22	67.18	12	55.67
	Females	<u>84</u>	<u>58.52</u>	<u>71</u>	<u>58.97</u>	<u>21</u>	<u>62.86</u>	<u>23</u>	<u>54.65</u>
	Total	155	60.70	139	60.20	43	65.07	35	55.00
Senior High	Males	26	62.23	16	65.69	36	58.61	28	57.39
	Females	<u>48</u>	<u>57.54</u>	<u>33</u>	<u>59.88</u>	<u>23</u>	<u>56.83</u>	<u>16</u>	<u>47.69</u>
	Total	74	58.62	49	61.78	59	57.92	44	53.86

Four Way Analysis of Variance of Percent "Not New to Me - New to Me" Student Feedback Scale Item Scores According to School Level, Group, Implementation and Student Sex

<u>Source</u>	<u>df</u>	<u>Mean Square</u>	<u>F</u>	<u>p</u>
Level	1	240.24	0.45	0.999
Group	1	452.29	0.85	0.999
Impl.	1	878.06	1.65	0.196
Sex	1	2252.88	4.23	0.038
Level x Group	1	525.29	0.99	0.999
Level x Impl.	1	728.65	1.37	0.241
Level x Sex	1	97.49	0.18	0.999
Group x Impl.	1	1838.69	3.46	0.060
Group x Sex	1	8.02	0.02	0.999
Impl. x Sex	1	6.76	0.01	0.999
Level x Group x Impl.	1	4.82	0.01	0.999
Level x Group x Sex	1	191.84	0.36	0.999
Level x Impl. x Sex	1	8.47	0.02	0.999
Group x Impl. x Sex	1	111.51	0.21	0.999
LevelxGroupxImpl.xSex	1	42.95	0.08	0.999
Error	580			

APPENDIX VIII

Repeated Measures Analysis
Results for Teacher Workshop
Pre, Post, and Delayed Post Tests

Percent Correct Knowledge Scores on Pre to Post
Basic Workshops Tests Comparing Implementation
Teachers with Non-Implementers by sex (N=78)

		<u>Males</u>			<u>Females</u>	
	N	Pre	Pst	N	Pre	Pst
Non- Implementers	31	57.48	77.23	28	56.89	85.50
Implementation Teachers	6	48.00	73.50	13	49.85	88.62

Source

	DF	MEAN SQUARE	F	P
BETWEEN SS				
Sex	1	974.79	4.20	<.05
Impl.	1	471.60	2.03	>.05
Sex by Impl.	1	138.07	.60	>.05
Error	74	231.86		
WITHIN SS				
Correct	1	20353.78	133.51	<.001
Sex by Correct	1	786.17	5.16	<.05
Impl. by Correct	1	406.66	2.67	>.05
Sex by Impl. by Correct	1	31.21	0.80	>.05
Error	74	152.45		

Percent "Not Sure" Knowledge Scores on Pre to
Post Basic Workshop Tests Comparing Implementation
Teachers with Non-Implementers by sex (N=78)

	<u>Males</u>			<u>Females</u>		
	N	Pre	Pst	N	Pre	Pst
Non-Implementers	31	16.84	6.10	28	21.86	3.21
Implementation Teachers	6	33.00	3.00	13	24.23	2.08

Source

	DF	MEAN SQUARE	F	P
BETWEEN SS				
Sex	1	91.65	0.45	>.05
Impl.	1	328.22	1.62	>.05
Sex by Impl.	1	224.51	1.11	>.05
Error	74	202.13		
WITHIN SS				
Not Sure	1	10669.71	69.31	<.001
Sex by Not Sure	1	-0.01	-0.00	>.05
Impl. by Not Sure	1	831.97	5.40	<.05
Sex by Impl. by Not Sure	1	397.96	2.59	>.05
Error	74	153.93		

Percent Incorrect Knowledge Scores on Pre to Post
Basic Workshop Tests Comparing Implementation
Teachers with Non-Implementers by sex (N=78)

		<u>Males</u>			<u>Females</u>	
	N	Pre	Pst	N	Pre	Pst
Non-Implementers	31	24.68	15.68	28	20.25	10.29
Implementation Teachers	6	18.00	22.50	13	24.92	8.31

Source

BETWEEN SS	DF	MEAN SQUARE	F	P
Sex	1	468.63	2.37	>.05
Impl.	1	12.95	.07	>.05
Sex by Impl.	1	10.43	.05	>.05
Error	74	197.41		
WITHIN SS				
Incorrect	1	1550.18	19.96	<.001
Sex by Incorrect	1	782.36	10.08	<.01
Impl. by Incorrect	1	75.27	.97	>.05
Sex by Impl. by Incorrect	1	651.67	8.39	<.01
Error	74	77.65		

Percent Positive Attitudes Toward Teenage Drinking
Scores on Pre to Post Basic Workshop Tests Comparing
Implementation Teachers with Non-Implementers by
sex (N=78)

	<u>Males</u>			<u>Females</u>		
	N	Pre	Pst	N	Pre	Pst
Non-Implementers	31	29.03	64.32	28	39.25	69.11
Implementation Teachers	6	36.67	83.00	13	27.69	81.08

Source					
BETWEEN SS	DF	MEAN SQUARE	F	P	
Sex	1	27.09	0.04	>.05	
Impl.	1	1146.16	1.53	>.05	
Sex by Impl.	1	1076.46	1.44	>.05	
Error	74	748.22			
WITHIN SS					
Positive	1	43619.94	127.18	<.001	
Sex by Positive	1	4.15	0.01	>.05	
Impl. by Positive	1	1917.90	5.59	<.05	
Sex by Impl. by Positive	1	250.18	0.73	>.05	
Error	74	342.97			

Percent "Not Sure" Attitudes Toward Teenage Drinking
Scores on Pre to Post Basic Workshop Tests Comparing
Implementation Teachers with Non-Implementers by
sex (N=78)

	<u>Males</u>			<u>Females</u>		
	N	Pre	Pst	N	Pre	Pst
Non-Implementers	31	23.84	13.55	28	19.29	9.29
Implementation Teachers	6	16.67	6.67	13	35.31	9.23

Source

	DF	MEAN SQUARE	F	P
BETWEEN SS				
Sex	1	246.36	0.53	>.05
Impl.	1	5.89	0.01	>.05
Sex by Impl.	1	1446.32	3.10	>.05
Error	74	467.29		
WITHIN SS				
Not Sure	1	5098.95	15.19	<.001
Sex by Not Sure	1	399.93	1.19	>.05
Impl. by Not Sure	1	399.93	1.19	>.05
Sex by Impl. by Not Sure	1	429.93	1.28	>.05
Error	74	335.67		

Percent Negative Attitudes Toward Teenage Drinking
Scores on Pre to Post Basic Workshop Tests Comparing
Implementation Teachers with Non-Implementers by
sex (N=78)

		<u>Males</u>			<u>Females</u>	
	N	Pre	Pst	N	Pre	Pst
Non-Implementers	31	47.03	21.94	28	41.43	21.43
Implementation Teachers	6	46.67	10.00	13	36.92	9.23

Source

BETWEEN SS	DF	MEAN SQUARE	F	P
Sex	1	443.52	0.50	>.05
Impl.	1	1350.11	1.52	>.05
Sex by Impl.	1	31.05	.04	>.05
Error	74	885.96		
WITHIN SS				
Negative	1	19226.65	58.45	<.001
Sex by Negative	1	317.70	.97	>.05
Impl. by Negative	1	595.39	1.81	>.05
Sex by Impl. by Negative	1	24.18	.07	>.05
Error	74	328.92		

Percent Positive General Drinking Attitude
Scores on Pre to Post Basic Workshop Tests
Comparing Implementation Teachers with by
Non-Implementers by sex (N=78)

	<u>Males</u>			<u>Females</u>		
	N	Pre	Pst	N	Pre	Pst
Non-Implementers	31	67.26	74.29	28	69.21	84.46
Implementation Teachers	6	69.17	80.17	13	68.77	81.46

Source

	DF	MEAN SQUARE	F	P
BETWEEN SS				
Sex	1	272.48	0.83	>.05
Impl.	1	30.30	.09	>.05
Sex by Impl.	1	202.37	.62	>.05
Error	74	327.59		
WITHIN SS				
Positive	1	3392.15	16.66	<.001
Sex by Positive	1	157.49	0.77	>.05
Impl. by Positive	1	3.08	.02	>.05
Sex by Impl. by Positive	1	68.45	.34	>.05
Error	74	203.64		

Percent "Not Sure" General Drinking Attitude
Scores on Pre to Post Basic Workshop Tests
Comparing Implementation Teachers with Non-
Implementers by sex (N=78)

	N	<u>Males</u>		N	<u>Females</u>	
		Pre	Pst		Pre	Pst
Non-Implementers	31	10.00	7.32	28	11.64	2.89
Implementation Teachers	6	13.67	2.67	13	8.69	5.00

Source

BETWEEN SS	DF	MEAN SQUARE	F	P
Sex	1	47.28	0.23	>.05
Impl.	1	5.39	0.03	>.05
Sex by Impl.	1	0.03	0.00	>.05
Error	74	201.59		

WITHIN SS

Not Sure	1	1094.87	10.26	<.01
Sex by Not Sure	1	2.45	0.02	>.05
Impl. by Not Sure	1	17.11	0.16	>.05
Sex by Impl. by Not Sure	1	287.31	2.69	>.05
Error	74	106.67		

Percent Negative General Drinking Attitude Scores
on Pre to Post Basic Workshop Tests Comparing
Implementation Teachers with Non-Implementers
by sex (N=78)

		<u>Males</u>			<u>Females</u>	
	N	Pre	Pst	N	Pre	Pst
Non-Implementers	31	21.65	17.36	28	18.07	11.54
Implementation Teachers	6	16.17	16.33	13	21.31	12.54

Source

	DF	MEAN SQUARE	F	P
BETWEEN SS				
Sex	1	103.93	0.49	>.05
Impl.	1	8.23	0.04	>.05
Sex by Impl.	1	185.06	.87	>.05
Error	74	212.70		
WITHIN SS				
Negative	1	605.79	3.78	>.05
Sex by Negative	1	200.62	1.25	>.05
Impl. by Negative	1	7.91	0.05	>.05
Sex by Impl. by Negative	1	71.86	0.45	>.05
Error	74	160.45		

Percent Correct Knowledge Scores on Pre,
Post and Delayed Post Tests Comparing
Implementation Teachers with Non-
Implementers by sex (N=63)

	MALES				FEMALES			
	N	Pre	Post	DPost	N	Pre	Post	DPost
Non-Implementers	25	57.60	75.96	75.60	19	58.26	86.21	80.53
Implementation Teachers	6	48.00	73.50	87.00	13	49.85	88.62	85.85

Source

BETWEEN SS	DF	MEAN SQUARE	F	P
Sex	1	993.10	3.49	>.05
Impl.	1	1.94	0.01	>.05
Sex by Impl.	1	-0.12	0.00	>.05
Error	59	284.79		
WITHIN SS				
Correct	2	12657.77	114.75	<.001
Sex by Correct	2	490.83	4.45	<.05
Impl. by Correct	2	897.50	8.14	<.001
Sex by Impl. by Correct	2	92.31	0.84	>.05
Error	118	110.31		

Percent "Not Sure" Knowledge Scores on Pre,
Post and Delayed Post Tests Comparing
Implementation Teachers with Non-Implementers
by sex (N=63)

	MALES				FEMALES			
	N	Pre	Post	DPost	N	Pre	Post	DPost
Non-Implementers	25	15.84	5.76	9.00	19	21.79	3.31	3.79
Implementation Teachers	6	33.00	3.00	3.00	13	24.23	2.08	2.77

Source

BETWEEN SS	DF	MEAN SQUARE	F	P
Sex	1	134.06	0.59	>.05
Impl.	1	73.03	0.32	>.05
Sex by Impl.	1	66.95	0.29	>.05
Error	59	228.26		
WITHIN SS				
Not Sure	2	6124.46	67.81	<.001
Sex by Not Sure	2	5.68	0.06	>.05
Impl. by Not Sure	2	631.92	7.00	<.001
Sex by Impl. by Not Sure	2	329.02	3.64	<.05
Error	118	90.33		

Percent Incorrect Knowledge Scores on Pre,
Post and Delayed Post Tests Comparing
Implementation Teachers with Non-Implementers
by sex (N=63)

	MALES				FEMALES			
	N	Pre	Post	DPost	N	Pre	Post	DPost
Non-Implementers	25	25.56	17.28	14.40	19	18.95	9.47	14.68
Implementation Teachers	6	18.00	22.5	9.00	13	24.92	8.31	10.39

Source				
BETWEEN SS	DF	MEAN SQUARE	F	P
Sex	1	397.34	2.33	>.05
Impl.	1	51.83	.30	>.05
Sex by Impl.	1	67.47	0.40	>.05
Error	59	170.29		
WITHIN SS				
Incorrect	2	1235.72	16.86	<.001
Sex by Incorrect	2	525.29	7.17	<.001
Impl. by Incorrect	2	142.17	1.94	>.05
Sex by Impl. by Incorrect	2	301.18	4.11	<.05
Error	118	73.27		

Percent Positive Attitudes Toward Teenage
Drinking Scores on Pre, Post, and Delayed
Post Tests Comparing Implementation Teachers
with Non-Implementers by sex (N=63)

	MALES				FEMALES			
	N	Pre	Post	DPost	N	Pre	Post	DPost
Non-Implementers	25	34.00	68.72	57.84	19	46.05	73.37	64.11
Implementation Teachers	6	45.83	83.00	78.83	13	30.77	84.08	69.00

Source

BETWEEN SS	DF	MEAN SQUARE	F	P
Sex	1	0.81	0.00	>.05
Impl.	1	2230.04	1.94	>.05
Sex by Impl.	1	2170.12	1.89	>.05
Error	59	1150.23		
WITHIN SS				
Positive	2	18642.31	47.18	<.001
Sex by Positive	2	80.76	0.20	>.05
Impl. by Positive	2	827.93	2.10	>.05
Sex by Impl. by Positive	2	412.82	1.04	>.05
Error	118	395.15		

Percent "Not Sure" Attitudes Toward Teenage Drinking
Scores on Pre, Post, and Delayed Post Tests Comparing
Implementation Teachers with Non-Implementers by sex
(N=63)

	MALES				FEMALES			
	N	Pre	Post	DPost	N	Pre	Post	DPost
Non-Implementers	25	23.96	13.00	13.00	19	17.11	9.21	10.53
Implementation Teachers	6	12.50	8.33	16.67	13	36.46	7.69	19.23

Source				
BETWEEN SS	DF	MEAN SQUARE	F	P
Sex	1	161.61	0.22	>.05
Impl.	1	196.63	0.27	>.05
Sex by Impl.	1	1508.11	2.06	>.05
Error	59	731.62		
WITHIN SS				
Not Sure	2	2016.40	5.99	<.003
Sex by Not Sure	2	383.59	1.14	>.05
Impl. by Not Sure	2	278.89	0.83	>.05
Sex by Impl. by Not Sure	2	710.66	2.11	>.05
Error	118	336.68		

Percent Negative Attitudes Toward Teenage Drinking
Scores on Pre, Post, Delayed Post Tests Comparing
Implementation Teachers with Non-Implementers by
sex (N=63)

	MALES				FEMALES			
	N	Pre	Post	DPost	N	Pre	Post	DPost
Non-Implementers	25	41.92	18.00	29.00	19	36.84	17.11	24.95
Implementation Teachers	6	41.67	8.33	4.17	13	32.69	7.69	11.54

Source

BETWEEN SS	DF	MEAN SQUARE	F	P
Sex	1	149.25	0.12	>.05
Impl.	1	3777.27	2.95	>.05
Sex by Impl.	1	60.01	0.05	>.05
Error	59	1282.17		
WITHIN SS				
Negative	2	8779.97	27.95	<.001
Sex by Negative	2	238.92	0.76	>.05
Impl. by Negative	2	856.42	2.73	>.05
Sex by Impl. by Negative	2	186.76	0.59	>.05
Error	118	314.13		

Percent Positive General Drinking Attitude Scores
Pre, Post, and Delayed Post Tests Comparing
Implementation Teachers with Non-Implementers
by sex (N=63)

	MALES				FEMALES			
	N	Pre	Post	DPost	N	Pre	Post	DPost
Non-Implementers	25	56.88	74.88	70.84	19	68.00	87.00	81.00
Implementation Teachers	6	69.17	80.17	79.83	13	68.77	81.46	77.69

Source

BETWEEN SS	DF	MEAN SQUARE	F	P
Sex	1	486.80	1.06	>.05
Impl.	1	71.57	0.16	>.05
Sex by Impl.	1	601.98	1.31	>.05
Error	59	461.11		
WITHIN SS				
Positive	2	2035.23	12.33	<.001
Sex by Positive	2	120.62	0.73	>.05
Impl. by Positive	2	26.27	0.16	>.05
Sex by Impl. by Positive	2	101.72	0.62	>.05
Error	118	165.09		

Percent "Not Sure" General Drinking Attitude Scores
on Pre, Post, and Delayed Post Tests Comparing
Implementation Teachers with Non-Implementers
by sex (n=63)

	MALES				FEMALES			
	N	Pre	Post	DPost	N	Pre	Post	DPost
Non-Implementers	25	9.80	6.48	5.80	19	10.26	1.68	3.37
Implementation Teachers	6	13.67	2.67	0.0	13	8.69	5.00	4.92

Source								
BETWEEN SS		DF		MEAN SQUARE		F		P
Sex		1		19.92		0.09		>.05
Impl.		1		5.94		0.03		>.05
Sex by Impl.		1		81.13		0.38		>.05
Error		59		216.08				
WITHIN SS								
Not Sure		2		749.88		10.31		<.001
Sex by Not Sure		2		38.55		0.53		>.05
Impl. by Not Sure		2		32.04		0.44		>.05
Sex by Impl. by Not Sure		2		159.43		2.19		>.05
Error		118		72.71				

Percent Negative General Drinking Attitude Scores
on Pre, Post, and Delayed Post Tests Comparing
Implementation Teachers with Non-Implementers
by sex (n=63)

	MALES				FEMALES			
	N	Pre	Post	DPost	N	Pre	Post	DPost
Non-Implementers	25	22.28	17.60	22.32	19	20.68	10.21	14.63
Implementation Teachers	6	16.17	16.33	19.17	13	21.31	12.54	16.23

Source

BETWEEN SS	DF	MEAN SQUARE	F	P
Sex	1	330.72	1.00	>.05
Impl.	1	35.52	0.11	>.05
Sex by Impl.	1	225.54	0.68	>.05
Error	59	331.18		
WITHIN SS				
Negative	2	433.88	3.18	<.05
Sex by Negative	2	207.21	1.52	>.05
Impl. by Negative	2	32.33	0.24	>.05
Sex by Impl. by Negative	2	7.53	0.06	>.05
Error	118	136.39		

Attitudes Toward Teenage Drinking Scores on Pre, Post, and Delayed Post Test by Amount of Formal Program Exposure and Sex (Response types combined and transformed to 0 to 100 scale) (N=63)

	<u>Males</u>					<u>Females</u>			
	n	Pre $\bar{X}$	Post $\bar{X}$	Delayed Post $\bar{X}$	n	Pre $\bar{X}$	Post $\bar{X}$	Delayed Post $\bar{X}$	
Basics only	13	51.7	74.5	62.2	7	58.8	74.6	72.7	
Basics & methods	12	39.3	75.7	66.3	12	51.9	79.8	67.3	
All	<u>6</u>	<u>52.0</u>	<u>87.7</u>	<u>87.7</u>	<u>13</u>	<u>48.8</u>	<u>87.8</u>	<u>78.4</u>	
	31	46.9	77.4	68.5	32	52.1	81.9	73.0	

<u>Between</u>		df		Ms		F		p	
Amount		2		1602.5		1.5		> .05	
Sex		1		313.9		0.3		> .05	
Amount x Sex		2		438.6		0.4		> .05	
Error		57		1059.6					
<u>Within</u>									
TeenAtt		2		13401.9		50.1		< .001	
Amt x TeenAtt		4		622.7		2.33		< .06	
Sex x TeenAtt		2		85.8		0.3		> .05	
AmtxSex xTeenAtt		4		165.6		0.6		> .05	
Error		114		267.3					

Attitudes Toward Teenage Drinking Scores on Pre,
Post, and Delayed Post Test by Client Type
(Response types combined and transformed into
0 to 100 scale) (N=63)

	n	Pre $\bar{X}$	Post $\bar{X}$	Delayed Post $\bar{X}$
Classroom Teachers	49	47.9	79.9	70.2
Teaching Specialists	8	45.0	79.1	70.0
Non-Teachers	6	68.7	78.7	76.7
<u>Between</u>	df	Ms	F	p
Client	2	843.3	0.8	>.05
Error	60	1058.3		
<u>Within</u>				
Client	2	4949.3	18.4	<.001
Client x Att	4	447.7	1.66	>.05
Error	120	269.6		

Attitudes Toward Teenage Drinking Scores on Pre,
Post, and Delayed Post Test by School Level
(Response types combined and transformed to
0 to 100 scale) (N=63)

		Pre	Post	Delayed Post
	n	$\bar{X}$	$\bar{X}$	$\bar{X}$
Elementary	17	53.5	75.3	64.3
Junior High	34	50.1	85.8	76.4
Senior High	12	42.6	68.5	64.3
<u>Between</u>	df	Ms	F	p
School Level	2	1979.7	2.0	<.15
Error	60			
<u>Within</u>				
Level	2	10721.8	40.3	<.001
Level x Att	4	370.1	1.4	>.05
Error	120	266.1		

Attitudes Toward Teenage Drinking Scores on Pre,
Post, and Delayed Post Tests by Subject Taught
(Response types combined and transformed into
0 to 100 scale) (N=63)

		Pre	Post	Delayed Post
	n	$\bar{X}$	$\bar{X}$	$\bar{X}$
Non-Science	44	50.1	77.6	68.3
Science	19	48.4	84.4	76.5
<u>Between</u>	df	mean square	f	p
Subject	1	785.29	0.75	>.05
Error	61	1049.46		
<u>Within</u>				
TeenAtt	2	14347.73	53.02	<.001
Subject by TeenAtt	2	375.32	1.39	>.05
Error	122	270.62		

Attitudes Toward Teenage Drinking Scores on Pre,
Post, and Delayed Post Tests by Relative or Friend
with a Drinking Problem (Response types combined
and transformed to 0 to 100 scale) (N=63)

		Pre	Post	Delayed Post
	n	$\bar{X}$	$\bar{X}$	$\bar{X}$
Neither friend or relative	22	42.4	73.5	66.6
Relative only	7	66.0	83.4	72.7
Friend only	15	51.4	84.4	72.1
Both relative and friend	19	50.4	81.7	73.9
<u>Within</u>	df	Ms	F	p
RL/FR	3	1166.3	1.1	>.05
Error	59	1031.9		
CI =				
<u>Between</u>				
TeenAtt	2	10737.5	38.8	<.001
RL/FR x TeenAtt	6	272.8	1.0	>.05
Error	118	276.6		

Attitudes Toward Teenage Drinking Scores on Pre,
Post, and Delayed Post Tests by Frequency of
Five or More Drinks Per Occasion (Response types
combined and transformed into 0 to 100 scale) (N=63)

		Pre	Post	Delayed Post
	n	$\bar{X}$	$\bar{X}$	$\bar{X}$
Never	22	43.0	75.7	70.1
Almost never	28	55.6	84.3	74.5
Once in a while	6	37.3	66.3	45.7
Less than half the time	4	52.7	93.0	90.0
More than half the time	3	62.0	74.3	66.3
<u>Between</u>	df	Ms	F	p
Freq >5	4	2089.5	2.2	>.05
Error	58	950.1		
<u>Within</u>				
AH	2	6394.8	23.5	<.001
AH x F > 5	8	333.1	1.2	>.05
Error	116	272.2		

"END OF DOCUMENT"